ICONES PLANTARUM.

VOL. I. NEW SERIES,

OR VOL. V. OF THE ENTIRE WORK.

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BY

SIR W. J. HOOKER, K.H., L.L.D., F.R.A., & L.S.,

VICE-PRESIDENT OF THE LINNÆAN SOCIETY, AND DIRECTOR OF THE ROYAL BOTANICAL GARDENS OF KEW.

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ICONES PLANTARUM;

OR

FIGURES,

WITH

BRIEF DESCRIPTIVE CHARACTERS AND REMARKS,

OF

NEW OR RARE PLANTS,

SELECTED FROM THE AUTHOR'S HERBARIUM.

By SIR WILLIAM JACKSON HOOKER, K.H.,

LL.D., F.R.A., AND L.S. [redacted]

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DIRECTOR OF THE ROYAL BOTANIC GARDENS, KEW.

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TAB. CDI.

Aulaya squamosa. *Harv.*

Floribus spicatis densis, corollæ limbo concavo integerrimo. *Harv. Gen. of S. African Pl. p.* 250.

Orobanche squamosa. *Thunb. Fl. Cap. p.* 455.

Hab. Cape of Good Hope; sandy hillocks in low places; Swartland, Saldanha Bay, Piqueberg and Verloren Valley. *Thunberg.* "The only specimens I have yet seen were gathered at Brach-fontein by *Mrs. Van Schwon.*" *(Hon. W. H. Harvey).*

This Mr. Harvey describes as having stems 2-3 feet high, simple or branched, closely covered with appressed orange or golden scales, the calyces bright orange and yellow, the tube of the corolla a brilliant flaring yellow, and the limb deep orange.

Fig. 1. Front view of a flower with bractea. *f.* 2. Corolla. *f.* 3. Pistil. *f.* 4. Section of ovary. *f.* 5, 6. Anthers and upper part of the filaments:—*magnified.*

Allan & Ferguson lithog

TAB. CDII.

Quercus Skinneri. *Benth.*

Ramis glabris, gemmis lanatis, foliis petiolatis ovato-v. sub-lanceolato-oblongis sinuato-dentatis dentibus longe aristatis utrinque glabris v. subtus ad axillas venarum barbatis, fructibus sessilibus maximis, cupulæ plano-pateriformis lignosæ squamis arcte imbricatis tenuibus latis, glandula globoso-subconica lignosa basi lata umbilicata intus dissepimentis incompletis irregulariter subdivisa. *Benth. Pl. Hartw. p.* 90. *Lindl. in Gardener's Chronicle,* 1841, *p.* 116, *cum. Ic.*

Hab. Mountains, Guatemala. *G. U. Skinner, Esq.* Sides of mountains of Acatenango, Medio Monte and Quezaltenango, towards the Pacific Ocean. *Hartweg.* "Arbor pulcherrima, 50-70 pedalis. Folia utrinque viridia, iis *Q. acutifoliæ* v. *Q. Xalapensis* similia. Specimina omnia jam deflorata, florum masculorum tamen amentum unicum vidi emarcidum, generi *Quercus* omnino consimile. Glandula sæpe 2 poll. diametro, pericarpio crasso lignoso. Dissepimenta spuria ex endocarpio formata, per sulcos seminis excurrentia, valde irregularia sunt, nec loculos completos unquam efformans." *Benth. l. c.*

A figure of this curious acorn, which only yields in size to that of the following species, is given by Dr. Lindley in the Gardener's Chronicle, where he observes that the internal structure resembles that of the wallnut.

Fig. 1. Acorn : *nat. size.*

1

. Tillar & Pearson. Litho

TABS. CDIII. CDIV.

Quercus corrugata. *n. sp.*

Ramis glabris, ramulis gemmulisque pilosis, foliis (deciduis?) petiolatis lato-lanceolatis sinuato-dentatis utrinque (etiam axillis) glabris, dentibus obtusis, cupulæ crassissimæ lignosæ brevi-turbinatæ inflexæ squamis arcte imbricatis crassis gibbosis acutis, glandula maxima sessili globoso-subconica basi latissima convexa apice depressa umbilicata umbonata.

Hab. Cerro del Tamber, Guatemala, where the average temperature of the climate is 68°—69°. *G. U. Skinner, Esq.*

For the knowledge of this splendid fruited oak, which attains a height of 80 feet, we are also indebted to G. U. Skinner, Esq. The acorns are even larger than those of *Q. Skinneri*, (see our preceding plate) and the foliage and the cupula, especially, are quite different: the latter singularly rough and corrugated. Mr. Bentham observes that the cotyledons of the embryo are unequal in size and slightly uneven on the surface, but that there is nothing like the dissepiments and furrows of *Q. Skinneri*, and only a few very slightly prominent ribs on the endocarp.

Fig. 1. Acorn: *nat. size.*

TABS. CDV. CDVI.

EUCALYPTUS MACROCARPA. *n. sp.*

Arbor ubique farinaceo-glaucescens, foliis cordato-ellipticis breviacuminatis, pedunculis axillaribus solitariis brevissimis unifloris, calycis magni crassissimi operculo conico-acuminato, capsula maxima breviter hemispherica marginata lignosa 4-5 valvi.

HAB. Guangan; Swan River Colony, Australia. *Mr. J. Drummond.*

One of the finest among the many fine plants lately sent to me by Mr. Js. Drummond from the Swan River Colony, is the present new species of *Eucalyptus*. It is noticed in Mr. Drummond's letters published in the 2d vol. of our "Journal of Botany," p. 343, and subsequent pages. Guangan is the native name of a country inland from the Swan River coast, constituting an open sandy desert, commencing about eighty miles E. S. E. of Freemantle and continuing for 200 miles. This barren sandy district is bordered by a considerable forest, composed principally of two species of *Eucalyptus*, called *Urac* and *Morral* by the aborigines. The present one is the *Morral*, conspicuous by its noble, glaucous, almost white leaves, its red flowers and its fruit, both of an unusually large size. The same species, however, Mr. Drummond has seen with white flowers.

Tab. CDV. CVI. Portion of a flowering plant: *nat. size*, and stamens: *magnified*. Tab. CDVII.

TAB. CDVII.

Eucalyptus macrocarpa. *n. sp.*

This plate represents the fruit of *Eucalyptus macrocarpa*, of which the flowering specimen is given in the preceding table.

Fig. 1. Young fruit, with 4 valves and cells, *nat. size.* *f.* 2. Fruit more mature, bursting into 5 valves, and containing 5 cells; *nat. size.* *f.* 3. Receptacle of immature seeds from *f.* 1; *nat. size.* *f.* 5. Immature seeds; *nat. size.* *f.* 6. The same seeds *magnified.* *f.* 4. Receptacle of seeds from *f.* 2, the seeds having fallen away; *nat. size.*

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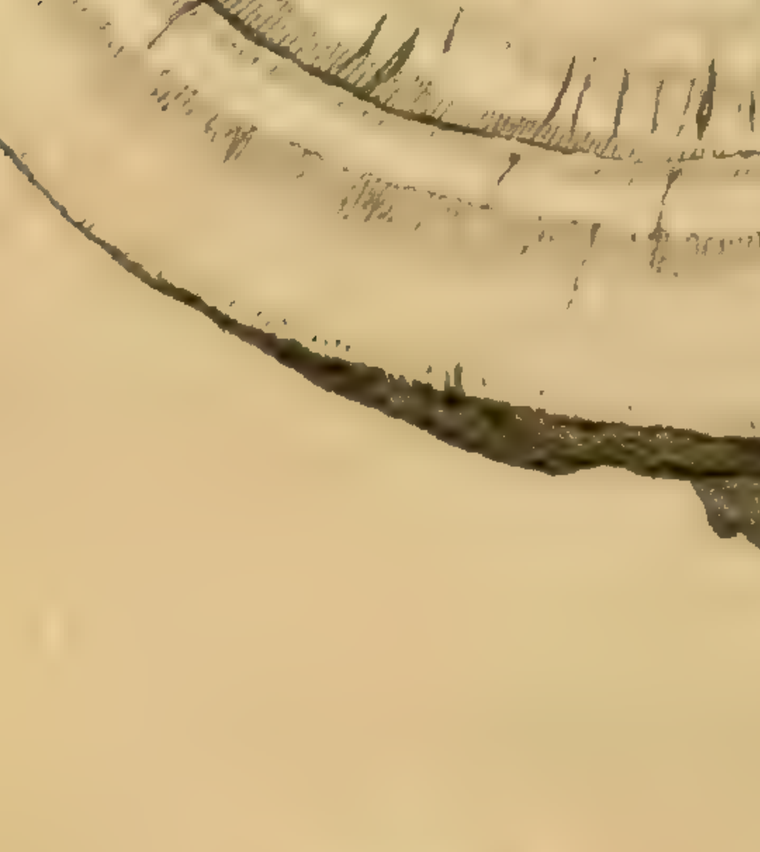

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TAB. CDVIII.

Macarthuria. *Hügeĭ.*

Cal. 5-sepalus, ebracteatus. *Petala* 5, oblonga, acuta, unguiculata. *Stam.* 10, fertilia, in cupulam filamentis æquilongam connata. *Antheræ* rimis lateralibus dehiscentes. *Ovarium* 3-4-loculare, loculis 2-3-ovulatis. *Ovula* ad umbilicum strophiola crenata cincta. *Styli* loculorum numero, a basi distincti.—Frutex *ramosus, aphyllus* (?), *ramis elongatis simplicibus, cymis fasciculiformibus sessilibus, 2-10-floris, juxta totam ramorum longitudinem dispositis. Hügel.*

Macarthuria *australis. Hügel, Enum. Pl. Nov. Holl. p.* 11.

Hab. Australia, King George's Sound. *(Hügel.)* Swan River. *Drummond.*

Hügel observes that this genus ranks between *Thomasia* and *Seringia;* differing from the latter in the persistent calyx, and the presence of petals, by the stamens being all fertile and the anthers opening with lateral dehiscence; and from the former by having the stamens united into a cup, by the styles being distinct at the base, and in the absence of bracteas beneath the calyx;—while from both of these it is very distinct in habit.

Fig. 1. Flower. *f.* 2. Stamens and pistil. *f.* 3. pistil. *f.* 4. ovary cut through transversely. *f.* 5. Capsule. *f.* 6. Capsule burst open. *f.* 7. seed:—*magnified.*

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TAB. CDIX.

Polypodium (Dictyopteris) attenuatum. *Br.*

Caudice repente radicibusque ferrugineo-tomentosis, frondibus simplicibus aggregatis submembranaceis lanceolatis costatis basi in petiolum longe attenuatis reticulatis, areolis oblongis, soris ellipticis oblongis uniserialibus anastomosi venularum insidentibus.

Polypodium attenuatum. *Br. Fl. Nov. Holl. p.* 147. *Spreng. Syst. Veget. v.* 4. *p.* 56.

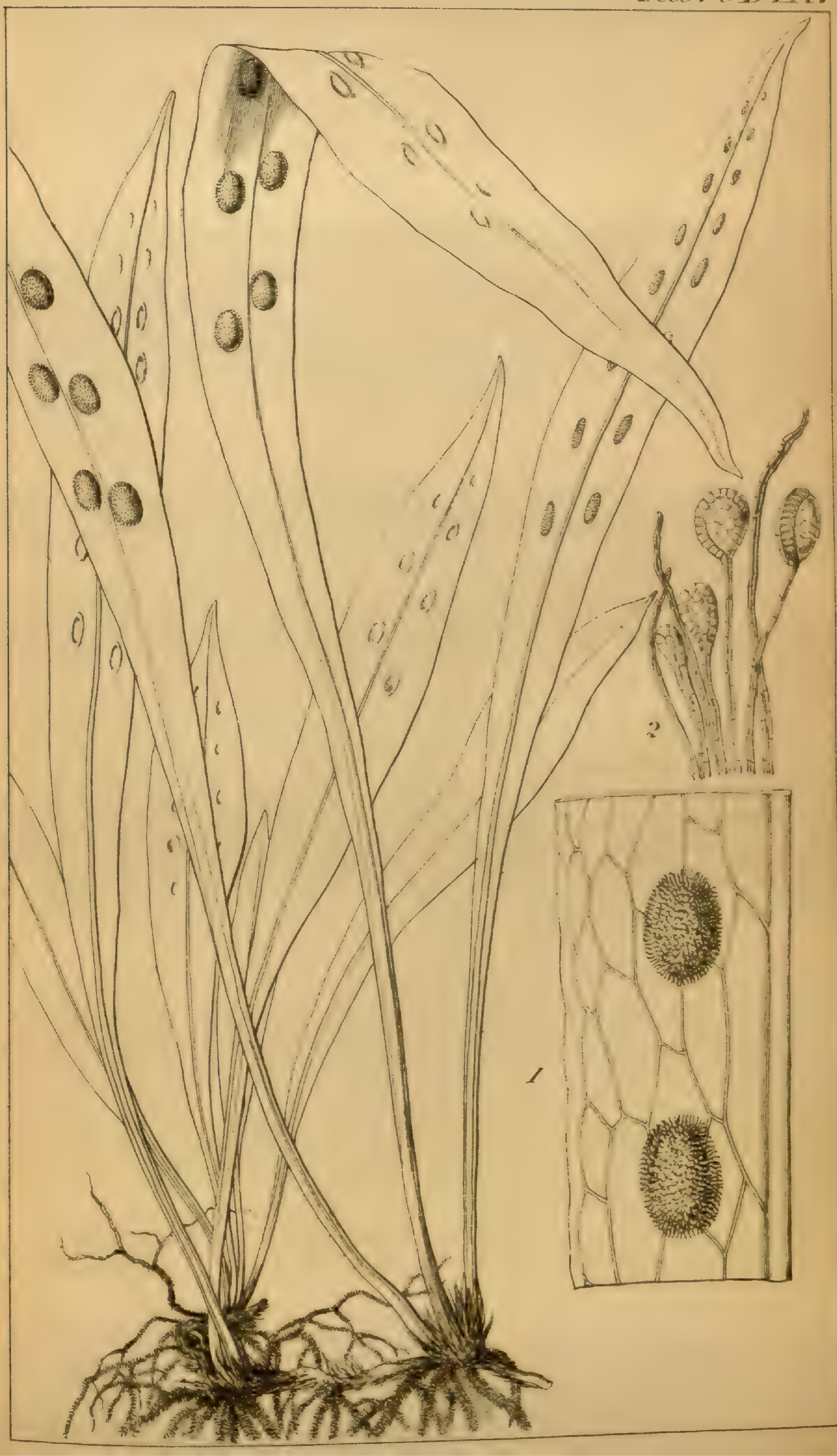
P. Brownianum. *Spreng. (fide Presl).*

Dictyopteris attenuata. *Presl. Tent. Pterid. p.* 194. *Hook. Gen. Fil. tab.* LXXI. B.

Hab. New Holland. *Brown.* New Zealand. *All. Cunningham. Wm. Colenso, Esq.*

The nature of the venation is of the highest importance in the study of the ferns; sometimes for discriminating species, and not unfrequently, especially when combined with difference in habit, for distinguishing genera. The simply reticulated venation in this and some allied species, has induced Presl to constitute the genus *Dictyopteris*. In the present instance the sori are dense and prominent, the stalks of the sporangia very long, and they are mixed with articulated filaments or abortive sporangia.

Fig. 1. Portion of the fertile frond. *f.* 2. Sporangia and articulated filaments; *magnified.*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TAB. CDX.

Wilsonia rotundifolia. *n. sp.*

Foliis ovato-rotundatis pilosiusculis, ramis calycibusque subcylindraceis dense hirsutis, floribus axillaribus terminalibusque solitariis.

Hab. Australia, Swan River Settlement. *Mr. J. Drummond.*

I am doubtful whether to refer this little plant to Mr. Brown's genus *Wilsonia* or to *Cressa*. It has not the deeply cleft calyx of the latter, nor indeed the urceolate calyx, nor distichous leaves of the former. The true *Wilsonia humilis* of Mr. Brown is figured in our Icones Plantarum at *vol.* 3. *tab.* 265. The habit indeed of both these plants is extremely similar to that of *Frankenia*. In our plant the cells of the ovary are generally 2-seeded; but the seeds are abortive.

Fig. 1. Flower from the axil of a leaf. *f.* 2. Corolla laid open. *f.* 3. Ovary cut through vertically. *f.* 4. The same cut through transversely. *f.* 5. Anther. *f.* 6. Leaf:—all *magnified.*

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TAB. CDXI.

Tropæolum cirrhipes. *n. sp.*

Foliis deltoideis obtusangulis sublonge petiolatis peltatis, pedunculis longissimis filiformibus volubilibus, calycis limbo erecto in calcar longum subulato-cylindraceum obtusum attenuato, petalis staminibus styloque inclusis.

Hab. Chacapoyas, Andes of Peru. *Mr. Mathews.* (*n.* 3177.)

I have seen only one specimen of this most remarkable plant, which in the form of the leaf, and in the extraordinary length and slenderness of the petiole, is quite unlike any hitherto described species of the genus. The leaves too have a variegated appearance in the dried state, exhibiting whitish lines, in which the principal veins run. The calyx and short petals are yellow-green, the long spur orange-red.

TAB. CDXII.

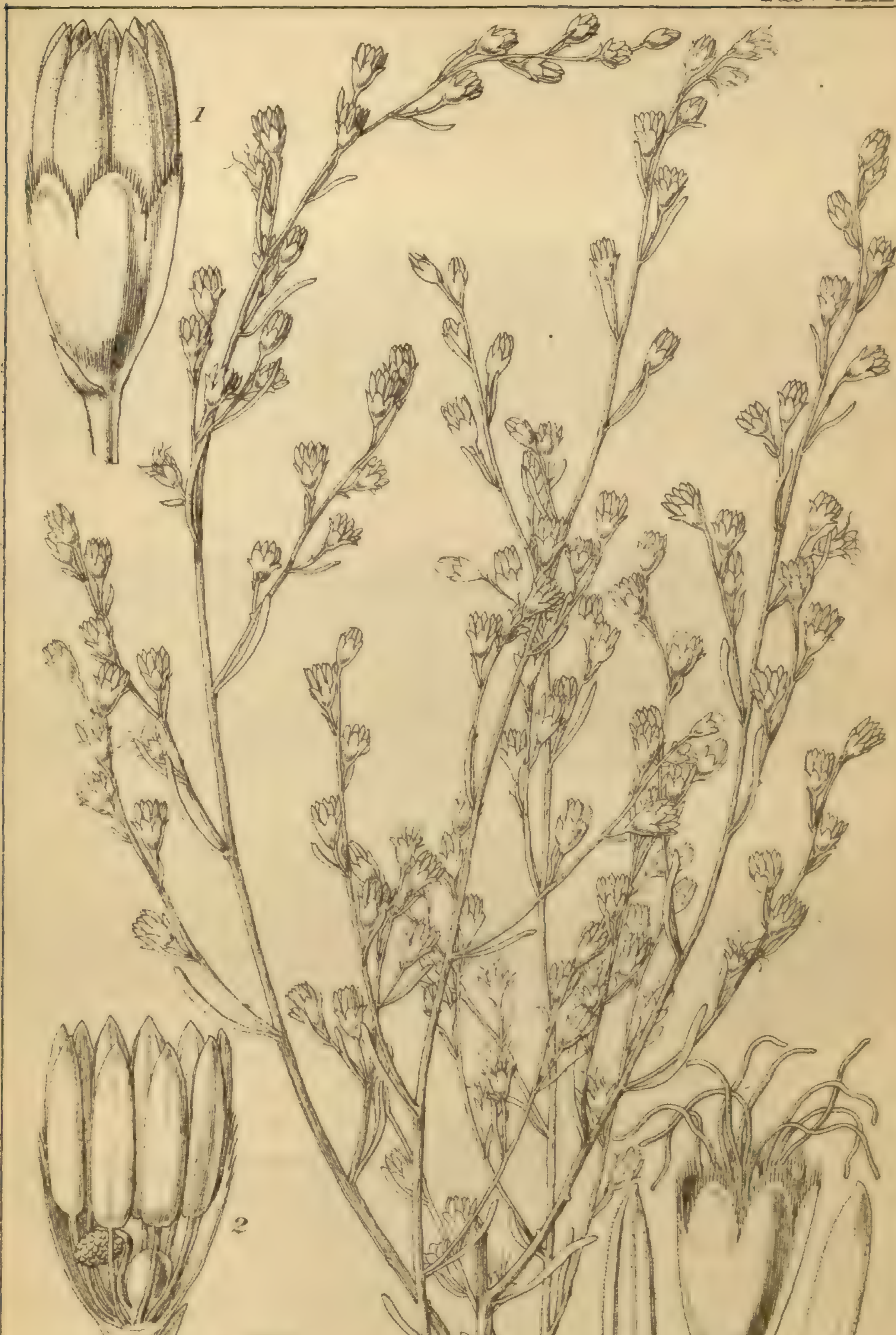
Macrostigma. *nov. gen.*

Gen. Char. Monoca *v.* Polygama. *Calyx* unibracteatus, monophyllus, subturbinatus, persistens, quinquelobus, lobis obtusis margine ciliatis. *Corolla* o.-Hermaphr. *Stamina* 10 exserta, hypogyna. *Filamenta* libera, glabra. *Antheræ* filamentis longiores, oblongæ, acutæ, minute glandulosæ, biloculares, lateraliter et longitudinaliter dehiscentes. *Germen* obovatum, uniloculare, biovulatum, ovulis ad basin loculi erectis. *Stylus* basilaris, sursum curvatus, dein deflexus, germine subtriplo longior. *Stigma* maximum, peltatum, granulosum, germinis fere magnitudine.—Fœm. *Stamina* 10 abortiva, ad filamenta elongata flexuosa antheris destituta redacta. *Pistillum* ut in hermaphrodita.—Frutex *erectus ramosus, ramis virgatis; foliis sparsis linearibus rigidis obtusis, basi utrinque stipula minuta brevi-subulata suffultis.* Flores *axillares in foliorum axillis superiorum, v. si mavis, racemosi, racemis foliosis.* Macrostigma *australe.*

Hab. Swan River Colony, Australia. *Mr. James Drummond.*

On the Natural Order to which this may be referred I will not venture to offer a conjecture, but content myself with representing such an analysis of this singular plant as my specimen will allow.

Fig. 1. Hermaphrodite flower. *f.* 2. The same, the calyx laid open. *f.* 3. Pistil. *f.* 4. Ovary laid open. *f.* 5, 6. Stamens. *f.* 7. Female flower :—*magnified.*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TAB. CDXIII.

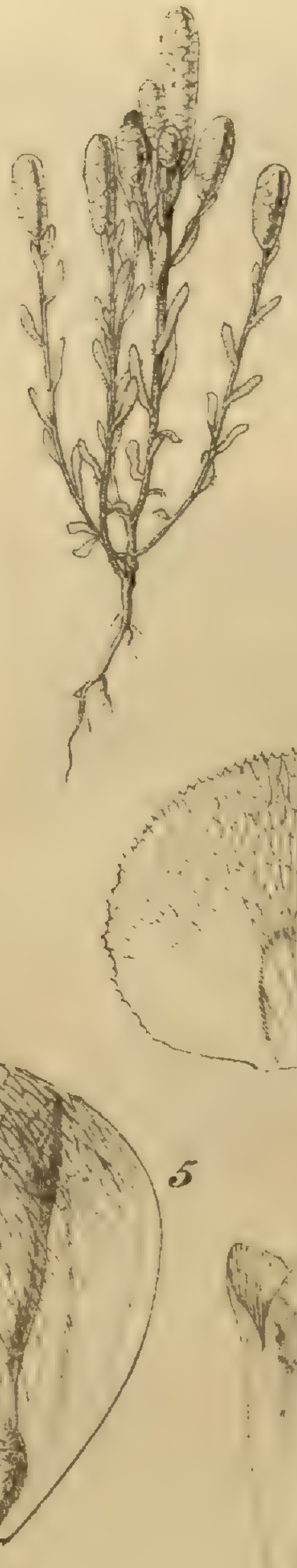
Crossolepis? pusilla. *Hügel.*

Erecta, glomerulis oblongis basi attenuatis, capitulis bifloris. *Hügel, Enum. Pl. Nov. Holl. p.* 61.

Hab. Swan River Colony, Australia, *(Hügel)*, *Mr. J. Drummond.*

A small erect annual plant, branching from the base: the stems red, clothed with deciduous down. Leaves alternate, linear, very obtuse. Capitula terminal, collected together so as to form a dense cylindrical spike of a glossy, straw-colour, attenuated at the base. Each capitulum consists of a two-flowered involucre of three scales, of a very delicate, membranaceous reticulated texture: the outer one (comparatively) large, almost orbicular, concave, denticulate at the margin: the two inner small, boat-shaped, compressed, so as to present a flattened keel, fringed at the margin above. Within the fold of each of these small scales is a very minute tubular floret. Ovary obovate, tuberculate. Corolla funnel-shaped, widening upwards, 3-lobed. Anthers and style altogether included.

Fig. 1. Spike or glomerule of capitula. *f.* 2. Inner view of a capitulum. *f.* 3. Outer view of do. *f.* 4, 5. The two inner scales of the capitulum with the flowers. *f.* 6. floret. *f.* 7. Upper part of the corolla laid open. *f.* 8. Branches of the style: *magnified.*



TAB. CDXIV.

Lachnostachys. *n. gen.*

Flores hermaphroditi bracteati. *Perianthium* longissime densissimeque lanatum, monophyllum, 6-lobatum, scariosum. *Stamina* hypogyna 6-8, perianthii lobis opposita. *Filamenta* filiformia, in tubum basi vel usque ad medium connata, tubo intus villosissimo. *Antheræ* biloculares. *Ovarium* subglobosum. *Stylus* filiformis. *Stigma* obtusum.—Frutices *oræ occidentalis Novæ Hollandiæ; ubique tomentosæ.* Folia *opposita rigida.* Spicæ *terminales et axillares, bracteatæ, cylindraceæ.* Flores *lana longissima ramosa intertexta tecti.*

Lachnostachys *albicans;* foliis lanceolato-ellipticis imbricatis ramisque albo-tomentosis, bracteis flore brevioribus, perianthio 6-lobo, staminibus exsertis, tubo filamentis subæque longo, ovario superne densissime piloso.

Hab. Swan River Colony, Australia. *Mr. James Drummond.*

Two very remarkable plants in Mr. Drummond's Swan River collection are those figured in the present and succeeding plate, belonging to the Order *Amaranthaceæ;* but so different from any genus known to me, especially in habit, that although my specimens are destitute of fruit, and although, on account of the singularly dense and intricate nature of the wool which covers the flowers, it is exceedingly difficult to investigate the exact structure of the minute flowers concealed within the woolly covering, I have ventured to constitute of them a new genus.

Fig. 1. Flowers. 2. Perianth laid open, the stamens being removed. *f.* 3. Stamens. *f.* 4. Pistil. *f.* 5, 6. Anthers. *f.* 7. Small portion of wool from the perianth: all more or less *magnified.*

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TAB. CDXV.

Lachnostachys ferruginea. *Hook.*

Foliis lato-ellipticis remotis ramisque dense ferrugineo-tomentosis, bracteis flores superantibus, perianthio 8-lobo, staminibus inclusis, tubo filamentis breviore, antheris dorso tuberculato, ovario granulato.

Hab. Swan River Colony, Australia, *Mr. J. Drummond.*

It is possible that when this and the preceding plant *(L. albicans)* are better known as to the structure of their fructification, the present may be found to constitute a different but closely allied genus. The bracteas are very large and of a ferruginous brown colour, contrasting singularly with the dense white balls of wool which cover the flowers within the bracteas; the perianth has 10 lobes or segments; the stamens are 8; the tube short; and at the back of each anther is a large granulated excrescence.

Fig. 1. Flower. *f.* 2. Perianth and staminal tube laid open. *f.* 3. Stamens and pistil. *f.* 4, 5. Anthers. *f.* 6. Small portion of wool from the perianth. *f.* 7. Inner; and *f.* 8, an outer view of a bractea: all more or less *magnified.*

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TAB. CDXVI.

TRIGLOCHIN? CALCARATUM. *n. sp.*

Triandrum, sepalis 3 ext. calcaratis, carpellis semiunitis, 3 ext. fertilibus apice reflexis, foliis linearibus flaccidis scapo breviori-bus, floribus laxe spicatis.

HAB. Swan River Colony, Australia. *Mr. James Drummond.*

Radix fibrosa. Folia 3-5 uncias longa, linearia, flaccida, basi dilatata, membranacea. Scapi 5-6 uncias longi, graciles, flaccidi. Flores laxe spicati. Sepala 6 erecta, quorum 3 exteriora majora, lato-ovata, acuta, antherifera, basi calcarata; 3 interiora ovata, ecalcarata. Ovaria 6 ovato-acuminata, primum erecta, subæqualia, inferne coadunata: tria exteriora fertilia, demum (statu fructificante) superne reflexa, stigmate infra apicem notata; tria interiora abortiva semper erecta. Ovulum solitarium, oblongum, erectum.

Fig. 1. Flowers. *f.* 2. Outer sepal, with its anther. *f.* 3. Front view of an anther. *f.* 4. Flower from which the 3 outer sepals are removed. *f.* 5. The pistils. *f.* 6. Inner sepal. *f.* 7. Immature fruit. *f.* 8. One of the outer carpels. *f.* 9. The same, the cell laid open. *f.* 10. Immature seed. *f.* 11. The 3 inner or abortive carpels:—all more or less *magnified.*

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TAB. CDXVII.

Lawrencia glomerata. *n. sp.*

Ramosissima, foliis spathulatis petiolatis superioribus sessilibus, stipulis ovatis acutis adnatis, floribus 2-3 glomeratis axillaribus, calyce plicato, carpellis reticulatim venosis.

Hab. Swan River Colony, Australia. *Mr. James Drummond.*

At Tab. CCLXI. of vol. 3 of this work, I established the genus *Lawrencia*, upon a very remarkable plant found on the northern coast of Van Diemen's Land and the opposite southern extremity of Australia, *Lawrencia spicata*. The present Swan River plant is undoubtedly a second species of the same genus.

The lower part of the stem seems to be woody, the rest herbaceous, much branched. Leaves with persistent adnate stipules, which are large and very distinct in the upper floral leaves. The flowers are axillary, glomerate; the calyx singularly plicate in the sinuses, the lobes very acute, erect. Petals acute, combined by their claws with the base of the staminal tube. The styles are 5. Carpels 5, adnate, the sides strongly reticulated. Different as the two species of *Lawrencia* are in habit from *Sida*, the structure of the flowers and fruit is nearer to that genus than I had imagined.

Fig. 1. Flower and bracteas. *f.* 2. Corolla. *f.* 3. Stamens. *f.* 4. Immature carpels. *f.* 5. Single ripe carpel. *f.* 6. The same laid open. *f.* 7. Seed. *f.* 9. leaf:—all more or less *magnified.*

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TAB. CDXVIII.

Oxalis Cataractæ. *All. Cunn.*

Cæspitosa ramosa decumbens, foliis longe petiolatis, foliolis sessilibus obcordato-lobatis lobis subdivergentibus, adultis utrinque caulibusque glabris venosis, subtus albido-glaucis, marginibus revolutis subintegris, petiolis (uncialibus) membranaceis basi dilatatis scariosis semivaginantibus, pedunculis elongatis unifloris petiolo longioribus pilis albidis conspersis, calycibus pilosis corolla fere triplo brevioribus. *All. Cunn.*

Oxalis Cataractæ. *All. Cunn. Bot. of N. Zeal. in Ann. of Nat. Hist. v.* 3, *p.* 315.

Hab. Northern Island of N. Zealand, on rocks beneath the great fall of the Kerri-Kerri river. *A. and R. Cunningham, W. Colenso, Esq.*

My specimens of this pretty little *Wood-sorrel* do not indeed exhibit the branching nature of the decumbent stem, but that it is the *O. Cataractæ* of Mr. A. Cunningham I cannot doubt, since it was sent me under that name, by Mr. Colenso, who gathered it in company with that lamented botanist. It is remarkable for the very large membranaceous stipules which form conspicuous sheaths around the slender stem.

TABS. CDXIX, CDXX.

Vitex littoralis. *A. Cunn.*

Foliis ternatis quinatisve, foliolis ellipticis obtusis cum acumine petiolatis glabris, paniculis brevibus racemosis axillaribus terminalibusve, ramis dichotomis, calyce campanulato subdentato, staminibus exsertis, corolla extus tomentosa. *A. Cunn.*

Vitex littoralis. *All. Cunn. Bot. of N. Zeal. in Ann. of N. Hist. v.* 1, *p.* 461.

Ephialis pentaphylla. *Banks et Sol. Mss. et Ic. ined. in Biblioth. Banks. (A. C.)*

Hab. Rocky shores of the Bay of Islands, N. Zealand, growing frequently within the range of salt water. *All. Cunningham, Mr. Colenso.*

This is described as a tree of very irregular growth, and which, from the hardness and durability of its wood, has been denominated the *New Zealand Oak*, and indeed it seems to answer all the purposes of that prince of trees. The wood is of a dark brown colour, close in the grain, and takes a good polish. It splits freely, works well, and derives no injury from exposure to the damp; twenty years' experience having proved that, in that period, it will not rot, though in a wet soil and underground. For ship-building it is, like the Teak (which belongs to the same natural order), a most valuable wood. It grows from 15 to 30 feet high without a branch, and varying from 12 to 20 feet in circumference.

Fig. 1. Flower. *f.* 2. Stamen. *f.* 3. Pistil: *magnified.*

TAB. CDXXI.

Fuchsia procumbens. *R. Cunn.*

Apetala, caule procumbente, foliis parvis longe petiolatis alternis cordato-rotundatis denticulatis, pedunculis solitariis axillaribus unifloris petiolo floreque brevioribus, calycis lobis oblongis reflexis, tubo superne dilatato, staminibus exsertis, stylo stamina superante, stigmate capitato.

Fuchsia procumbens. *R. Cunn. mst. All. Cunn. Bot. of N. Zeal. in Ann. of N. Hist. v.* 3, *p.* 31.

Hab. Northern Island, N. Zealand, around the village of Matauri on the East Coast, opposite the Cavallos Isles, inhabiting the sands immediately above the range of the tide, where it was found in flower in March, 1834, by *Richard Cunningham.* Found also by *W. Colenso, Esq.* to whom I am indebted for the specimen here figured.

This is very different from the only other species of the genus yet known to inhabit N. Zealand, and from every other described one. We have seen a living plant of it in the possession of the Rev. Mr. Williams of Hendon.

Fig. 1. Flower: *magnified.*

TAB. CDXXII.

Pteris (Allosorus) rotundifolia. *Forst.*

Frondibus pinnatis, pinnis alternis obtusissimis cum mucrone glabris obsolete nervosis, superioribus ovato-ellipticis basi truncatis, inferioribus rotundatis basi cuneatis, soris latis continuis demum nudis, stipite basi scabro reliquo rachique rufo-hispidis paleaceisque.

Pteris rotundifolia. *Forst. Prodr. n.* 420. *Willd. Sp. Pl. v.* 5, 4. *p.* 563. *Sw. Syn. Fil. p.* 102 *et* 297. *Rich. Fl. Nov. Zeal. p.* 78. *All. Cunn. Bot. N. Zeal. in Hook. Comp. Bot. Mag. v.* 2, *p.* 355.

Hab. New Zealand, Middle Island, *Forster.* Dry forests on the banks of the Kaua-Kaua and Wycady rivers, Bay of Islands. *All. Cunningham, W. Colenso, Esq.* Astrolabe Harbour. *D'Urville.*

This beautiful plant appears to grow in tufts; the fronds, including the stipes, one and a half and two feet high. Stipes and rachis perfectly terete, red-brown, glossy; the base of the former is rough, scarcely hispid, the rest clothed with spreading ferruginous rigid hairs and scales. The pinnæ are about $\frac{3}{4}$ of an inch long, of a pale very opaque green, paler still below, and there having, generally, a line of paleaceous setæ; the rest quite glabrous and exhibiting no trace of nerves; above, in the dry state, the nerves are very indistinctly seen, pinnated on the costa and dichotomous; and it is on the branches within the margin that the sori form a continued broad line, at first covered with the marginal involucre, afterwards the involucre spreading open and exposing the sori.

Tab. CDXXII.

TAB. CDXXIII.

Asplenium bulbiferum. *Forst.*

Frondibus lato-lanceolatis bipinnatis, pinnis alternis lanceolatis glabris, pinnulis ovato-oblongis obtusis inciso-pinnatifidis basi attenuatis in rachi lata decurrentibus, axillis superne proliferis, laciniis integris v. bidentatis, soris in singula lacinia (pinnis inferioribus exceptis) medium versus, stipite rachique alata inferne squamulosis.

Asplenium bulbiferum. *Forst. Prodr. n.* 433. *Willd. Sp. Pl. v.* 5, *p.* 345. *Sw. Syn. Fil. p.* 84, 278. *Schkuhr, Fil. v.* 79. *Spreng. Syst. Veget. v.* 4, *p.* 89. *Rich. Fl. Nov. Zel. p.* 75. *(excl. syn.* A. laxi, *Br.) All. Cunn. Bot. N. Zeal. in Hook. Comp. Bot. Mag. v.* 2, *p.* 364.

Hab. New Zealand. *Forster.* Middle Island, Astrolabe Harbour. *D'Urville.* Northern Island; in humid woods, on the banks of the Kaua-Kaua, Bay of Islands. *All. Cunningham, Wm. Colenso, Esq.*

Our specimens are about 2 feet long. Several of the superior pinnæ, especially in the axils of the segments, bear little bulbs which exhibit themselves on the upper surface and produce young fronds while still attached to the parent.

Fig. 1. Fertile pinnule:—*magnified.*

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TAB. CDXXIV.

Corokia. *A. Cunn.*

Gen. Char. *Flores hermaphroditi* (dioici, *A. C.*) *Calycis tubus* elongato-turbinatus, ovario adhærens; limbo 5-fido, persistente, per æstivationem valvato. *Petala* 5, lanceolata, decidua, lobis calycis alterna, intus basi squamula fimbriata instructa. *Stamina* 5, petalis alterna, iis breviora: *Filamenta* basi dilatata: *Antheræ* lineari-oblongæ, intus rimis duabus longitudinalibus dehiscentes. *Glandulæ epigynæ* 5, laciniis calycinis oppositæ: *Ovarium* inferum, biloculare, loculis 1-ovulatis pendulis. *Stylus* staminibus brevior. *Stigma* incrassatum, bifidum. *Drupa* 2-locularis, dipyrena.—Frutex 10-*pedalis, ramulis foliisque subtus albo-tomentosis.* Folia *alterna, coriacea, lanceolata, breviter petiolata, supra glabra, nitida, punctulata, penninervia, reticulata.* Flores *parvi, subpaniculati, bracteati; paniculis brevibus, axillaribus terminalibusque, undique, etiam petalis extus, piloso-canis.*

Corokia buddleoides. *All. Cunn. Bot. N. Zeal. in Ann. of Nat. Hist. v. 3, p. 249.*

Hab. New Zealand, Northern Island, margins of woods on the shores of the Bay of Islands, Wangaroa, &c. *A. and R. Cunningham, W. Colenso, Esq.*

The general aspect of this plant is a good deal similar to that of *Buddlea.* Its generic name is derived from that by which it is known to the natives "Korokia-taranga." Mr. Cunningham speaks of it as diœcious. My specimens exhibited stamens in the same flower with the pistil.

Fig. 1. Portion of a leaf, upper surface. *f.* 2. Flower. *f.* 3. Petals and stamens. *f.* 4. Calyx and pistil. *f.* 5. Young fruit. *f.* 6. Ovary cut through. *f.* 7. Young fruit laid open: —*magnified.*

Tab. CDXXIV.

TAB. CDXXV.

Persoonia quinquenervis. *n. sp.*

Ramulis foliisque junioribus alabastrisque sparse pilosulis, foliis spathulato-lanceolatis rigidis mucronatis quinquenerviis sub lente punctulis hyalinis scabriusculis, floribus solitariis erectis, antheris stigmateque obtusis.

Hab. N. Holland, Swan River Colony. *Mr. James Drummond.*

With the exception of the young shoots and the flower-buds, which are slightly hairy, the rest of the plant is quite glabrous. The flowers are axillary. Peduncles solitary, single-flowered. Sepals lanceolate, acuminate, coriaceous. Anthers and style glabrous.

Fig. 1. Leaf:—*slightly magnified.*

TAB. CDXXVI.

Persoonia Laureola. *Lindl.*

Undique glaberrima, foliis late ovalibus basi angustatis obtuse mucronatis submembranaceis penninerviis, floribus axillaribus erectis, perianthiis acuminatis, antheris obtusis, stigmate dilatato.

Persoonia Laureola. *Lindl. Sw. Riv. Bot. p.* xxxv.

Hab. Swan River Colony, New Holland. *Mr. Jas. Drummond.*

Allied to *P. salicina*, (Pers. and Brown), but with much broader and thinner, not inæquilateral, leaves. Dr. Lindley describes the apex of the sepals as being minutely pubescent, which is not the case in our specimens.

TABS. CDXXVII. CDXXVIII.

Lomaria procera. (*Spreng.*) *var.* β.

Frondibus pinnatis oblongo-ellipticis, pinnis sterilibus lanceolato-ensiformibus acuminatis serratis basi subcordatis, fertilibus (ejusdem v. diversæ frondis) linearibus costa subtus paleacea, indusiis subintramarginalibus. *Br.*

Lomaria procera. *Spreng. Syst. Veget. v.* 4, *p.* 65. *A. Cunn. Bot. of N. Zeal. in Comp. Bot. Mag. v.* 2, *p.* 363. *(excl. syn. Rich.)*

Stegania procera. *Br. Prodr. p.* 153. *(non Rich. Fl. Nov. Zel.)*

Blechnum procerum. *Sw. Syn. Fil. p.* 115. *Labill. Nov. Holl.* 2, *p.* 97, *t.* 247. *Willd. Sp. Pl. v.* 5, *p.* 415.

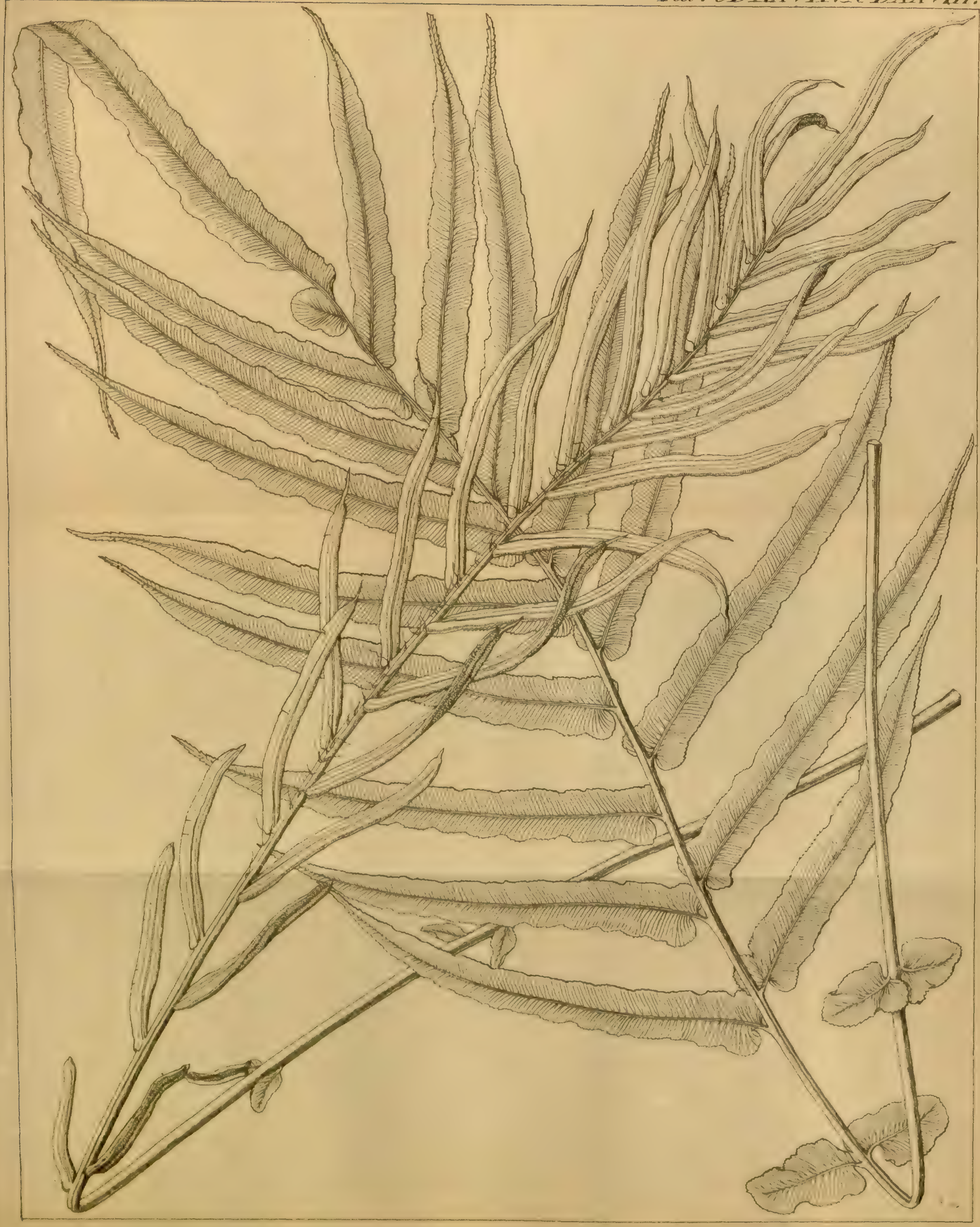
Asplenium procerum. *Bernh. Act. Erf.* 1802, *p.* 4, *f.* 1.

Osmunda procera. *Forst. Prod. n.* 414.

β; pinnis sterilibus valde acuminatis, fertilibus omnibus ad basin soriferis. (Tab. Nostr. CDXXVII. CDXXVIII.)

Hab. New Holland and Van Diemen's Land. *Brown.* New Zealand. *Forster.* Bay of Islands, Wangaroa, &c. *A. and R. Cunningham, W. Colenso, Esq.*

This appears liable to considerable variation, both in the sterile and fertile pinna. In Labillardière's plant, the former are very obtuse. In a var. mentioned by Mr. A. Cunningham, the base of the fertile pinnæ is much dilated and sterile, similar to what is figured as *Steg. procera* in Rich. *Fl. Nov. Zel.* t. 13. but the sterile frond being there pinnatified, not pinnate, proves that that portion of the plant, at least, cannot be the same as ours.



TAB. CDXXIX.

Lomaria lanceolata. *Spr.*

Frondibus sterilibus pinnatifidis lanceolatis scaberulis laciniis approximatis oblongis obtusiusculis subfalcatis denticulatis infimis abbreviatis orbiculatis, fertilibus pinnatis, pinnis remotis linearibus longitudine fere fertilium, rachi stipiteque nudis.

Lomaria lanceolata. *Spr. Syst. Veget. v.* 4, *p.* 62. *All. Cunn. Bot. N. Zeal. in Hook. Comp. Bot. Mag. v.* 2, *p.* 363.

Stegania lanceolata. *Br. Prodr. p.* 152. *A. Rich. Fl. Nov. Zel. p.* 86. *Endl. Prodr. Norf. p.* 81.

Hab. Van Diemen's Land. *Brown.* Norfolk Island. *(Endlicher).* New Zealand, Bay of Islands, Kerri River and Astrolabe Harbour, Cook's Strait. *A. and R. Cunningham, Wm. Colenso, Esq. D'Urville.*

I possess the same, or a very nearly allied species, gathered by Bertero in Juan Fernandez. It scarcely differs, but in the fertile pinnæ being remarkably decurrent, so that the fertile fronds may almost be called pinnatifid.

Fig. 1. Fertile pinna:—*slightly magnified.*

TAB. CDXXX.

Geniostoma ligustrifolium. *A. Cunn.*

Fruticosum, foliis ellipticis ovatisve acuminatis subtus discoloribus, corollæ laciniis reflexis, stigmate depresso-capitato. *A. Cunn.*

Geniostoma ligustrifolium. *A. Cunn. Bot. of N. Zeal. in Ann. Nat. Hist. v. 2, p. 47.*

Geniostoma rupestre. *A. Rich. Fl. N. Zeal. p. 207. (non Forst).*

Aspilotum lævigatum. *Banks et Sol. Mss. (fide A. Cunn.)*

Hab. New Zealand, Bay of Islands, in dry woods. *Sir Joseph Banks, All. and R. Cunningham, D'Urville, W. Colenso, Esq.*

Frutex, ut videtur, mediocris, valde ramosus, glaber. Rami teretes. Folia opposita, petiolata, stipulata : stipulis oppositis in vaginulam brevem intrapetiolarem unitis. Pedunculi breves, ramosi, axillares, glomerati, pedicellis bibracteatis. Calyx profunde quinquefidus, inferus, laciniis ovatis, acuminatis, patentibus. Corolla rotato-campanulata, 5-fida, laciniis patentibus vel reflexis, ovatis, intus barbatis. Stamina 5, ad faucem corollæ inserta, laciniis alterna. Filamentum brevissimum : Anthera lato-ovata. Ovarium subglobosum, biloculare ; placentis centralibus. Ovula numerosa. Stylus brevis. Stigma capitatum, medio depressum, subbifidum.

Fig. 1. Flower. *f.* 2. Calyx and pistil. *f.* 3. Stamen. *f.* 4. Ovary cut through transversely :—*magnified.*

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TAB. CDXXXI.

Earina. *Lindl.*

Gen. Char. *Sepala* erecta, æqualia, acuta, membranacea, carinata. *Petala* carnosa, obtusata. *Labellum* carnosum, posticum, cucullatum, trilobum, disco nudo, cum columnâ continuum et subparallelum. *Columna* teres, nana, stigmatis obliqui labio inferiore prominulo. *Clinandrium* proclive. *Anthera* bilocularis. *Pollinia* 4, preparia cohærentia, collateralia.—Herba *caulescens; rhizomate articulato, repente.* Folia *linearia, disticha, vaginantia.* Flores *parvi, paniculati, bracteis cartilagineis, striatis, auriculatis. Lindl.*

Earina mucronata. *Lindl. in Bot. Reg. sub t.* 1699.

Epidendrum autumnale. *Forst. Prodr. n.* 319.

Cymbidium autumnale. *Sw. Nov. Act. Ups. p.* 72. *Rich. Fl. N. Zel. p.* 169.

Hab. New Zealand, Northern Island, *Sir Jos. Banks.* Moist woods, on rocks and trees, Bay of Islands, Wangaroa, &c. *A. and R. Cunningham, W. Colenso, Esq.* Dusky Bay. *Forster.*

I believe the general structure of the flower, as here represented, is correct; but the specimens did not allow of so accurate an analysis as I could have wished. Professor Lindley refers the genus to the group of *Malaxideæ.*

Fig. 1. Flower. *f.* 2. Labellum. *f.* 3. Column:—*magnified.*

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TAB. CDXXXII.

HAKEA CONCHIFOLIA. *n. sp.*

Ramis superne dense pubescentibus hirsutissimisque, foliis reniformi-cordatis repandis spinoso-dentatis reticulatim venosis glaucis, floribus axillaribus fasciculatis.

HAB. New Holland, Swan River Colony. *Mr. Jas. Drummond.*

A species evidently nearly allied to *Hakea cucullata, Br. Prod. Suppl.* p. 30, detected by Mr. Baxter, at King George's Sound: but that has the leaves quite destitute of spinous teeth. The fruit I have not seen. The flowers are small, and in the dried specimens at least, concealed by the concave and almost convolute leaves.

Fig. 1. Flowers. *f.* 2. Single flower more expanded. *f.* 3. Pistil with the hypogynous gland. *f.* 4. Apex of a sepal, with the anther:—*magnified.*

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TAB. CDXXXIII.

Hakea platysperma. *n. sp.*

Foliis tereti-filiformibus apice mucronato-spinosis, capsulis globoso-compressis ecalcaratis rugosulis, valvis exacte hemisphæricis intus concavis cribrosis, seminibus orbicularibus latissime alatis hinc lævibus illinc disco muricatis.

Hab. Swan River Colony, New Holland. *Mr. Jas. Drummond.*

The fruit, perhaps, of the *Hakeæ* in general, will be found to afford excellent characters for distinguishing the species: and here the capsule is very remarkable and very much resembling castanets. Each valve is hemisphærical, concave within, and there having several irregular openings, 2 or 3 lines deep: these are occupied by the spine-like processes of the back of each seed: and these seeds are so large as to fill the whole area of the valves.

Fig. 1. Inner view of a seed. *f.* 2. Outer view of do. showing the muricated disk. *f.* 3. Side view of a seed, showing the smooth *inner*, and the muricated disk of the *outer* surface:—*nat. size.*

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TAB. CDXXXIV.

Hakea pandanicarpa. *Br.*

Foliis integerrimis oblongo-linearibus basi attenuatis immerse nervosis aveniis apiculo sphacelato, capsulis gibbosis obovatis tessellatis tuberculis conicis, seminibus undique alatis. *Br.*

Hakea pandanicarpa. *Br. Prodr. Suppl. p.* 29.

Hab. Between Cape Arid and Lucky Bay, South shores of N. Holland. *Mr. Baxter.*

This is very appropriately named by Mr. Brown, from the resemblance of its fruit to that of a *Pandanus* (Screw Pine). I have not seen the flowers, nor does it appear that they were discovered.

TABS. CDXXXV. CDXXXVI.

Hakea tricostata. *Br.*

Ramis gemmisque tomentosis, foliis oblongis obtusis mucronatis grosse trinerviis venosis marginatis inferne attenuatis junioribus sericeis, capsulis erectis ovatis acuminatis ecalceratis tuberculatis, pedunculo fructifero brevi superne incrassato.

Hab. King George's Sound. *Mr. Baxter.*

I do not find any species in Mr. Brown's Prodromus (including the Supplement) which accords with this. The leaves are 5-7 inches long, thick and hard. In the axils of the upper ones are the floriferous gemmæ. Lower down are the ripe capsules, scarcely an inch long, with a short thickened peduncle, and beset with small scattered dark-coloured warts.

TAB. CDXXXVII.

HAKEA HETEROPHYLLA. *n. sp.*

Foliis mucronatis tereti-filiformibus compressis hinc sulcatis simplicibus vel bi-trifurcatis, aliis ovali-spathulatis planis, gemmis floriferis terminalibus, capsulis deflexis oblique ovatis compressis tuberculatis in ramis brevibus terminalibus.

HAB. Swan River, New Holland. *Mr. Fraser.*

There are only three species in that division of *Hakea* to which this plant belongs, "*Folia plura filiformia : aliqua plana.*" Two of them are from the south coast of New Holland, but neither agrees precisely with the present, which has three very distinct forms of leaf; 1. tereti-filiform, compressed, with a groove on the upper side; 2. more compressed, and bi-trifurcate or subpinnatifid; 3. shorter, broadly spathulate and quite entire. The floral gemmæ are on short, patent branches, and the capsules are also terminal on the older and thicker ones.

TAB. CDXXXVIII.

Isopogon axillaris. *Br.*

Foliis cuneato-lingulatis mucronulatis, capitulis axillaribus paucifoliis, bracteis involucrantibus ovatis imbricatis, perianthii laminis longitudinaliter barbatis, stigmate fusiformi. *Br.*

Isopogon axillaris. *Br. Linn. Trans. v.* 10. *p.* 74. *Prodr. p.* 367.

Hab. South coast of New Holland. *R. Brown, Esq.* King George's Sound. *Fraser.*

This, in its inflorescence, differs considerably from the greater number of species of *Isopogon.* Here the flowers are axillary and lax. Each segment of the perianth, too, has a beautiful tuft of white silky hairs, and the stigma is fusiform.

Fig. 1. Flower. *f.* 2. Pistil. *f.* 3. Apex of a segment of the perianth : *magnified.*

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TABS. CDXXXIX. CDXL.

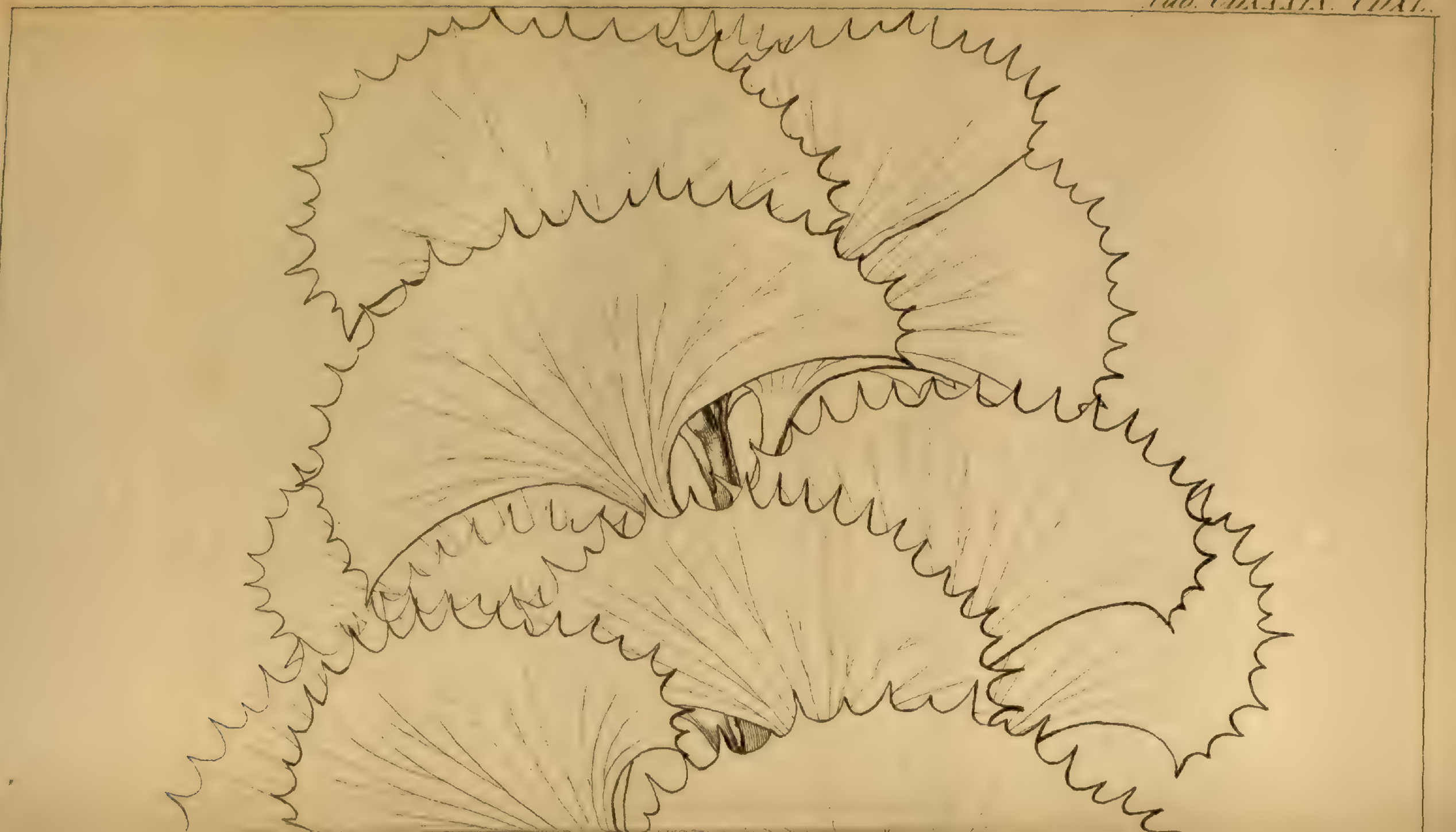
Hakea Baxteri. *Br.*

Foliis flabellato-cuneatis apice rotundato multidentato lateribus integerrimis, adultis glabris immerse venosis, capsulis ecalcaratis gibbosis. *Br.*

Hakea Baxteri. *Br. Prodr. Suppl. p.* 28.

Hab. New Holland, King George's Sound. *Mr. Baxter.*

Nothing can be more singular than the varied form of the fruit and foliage of the genus *Hakea*, of which numerous species exist on the south and south-western shores of Australia. The present has beautifully fan-shaped leaves, but of a singularly thick and coriaceous character.



TAB. CDXLI.

Hakea cucullata. *Br.*

Foliis integris subrepandis cucullatis reniformi-cordatis acutiusculis nervosis reticulato-venosis, capsulis ecalcaratis. *Br.*
Hakea cucullata. *Br. Prodr. Suppl. p.* 30.
Hab. New Holland, King George's Sound. *Mr. Baxter.*

The affinity of *H. conchifolia* to this has been already noticed, under our Tab. 432. The fruit only appears to have been discovered of this species.

TAB. CDXLII.

Hakea incrassata. *Br.*

Foliis integerrimis anguste lanceolatis obsolete 3 (-5)-nervibus apiculo sphacelato, capsulis refractis obovatis (seu obovato-globosis rima longitudinali) gibbosis lævibus ecalcaratis apiculo adscendenti, (pedunculo ramoque fructifero infra capsulam crassissimis). *Br.*

Hakea incrassata. *Br. Prodr. Suppl. p.* 29.

Hab. New Holland, Swan River Colony. *Mr. Fraser*, (fruit.) *Mr. Jas. Drummond*, (flower.)

My fruiting specimen is from Mr. Fraser, to whom Mr. Brown attributes the discovery of this species. But the most remarkable peculiarity about it is the thickening of the fruit-stalk and of the portion of the branch below it, whence I apprehend Mr. Brown's specific name is derived. What I take to be the same species from Mr. Drummond is in flower. The flowers very small, axillary, clustered, downy.

TAB. CDXLIII.

Hakea cristata. *Br.*

Foliis cuneato-obovatis spinoso-dentatis immerse venosis ramulisque glaberrimis, capsulis bicristatis, cristis inciso-dentatis. *Br.*

Hakea cristata. *Br. Prodr. Suppl. p.* 28.

Hab. New Holland, Swan River Colony. *Mr. Fraser. Mr. Jas. Drummond.*

The leaves are glaucous, peculiarly harsh and rigid, the bark dark brown, slightly pruinose in the younger branches.

I possess a flowering specimen from the Swan River, with leaves almost twice the size of this, and much broader; the spines more distant, and the bark much paler and redder. The flowers are very small, arising from the axils of deciduous scales (of which the gemmæ are seen in our figure), thus forming a short raceme, of which the axis, or peduncle, is clothed with silky wool.

TAB. CDXLIV.

Hakea stenocarpa. *Br.*

Foliis integerrimis linearibus apiculo acuto sphacelato marginatis uninervibus, venis obsoletis, capsulis lineari-subulatis falcatis ecalcaratis. *Br.*

Hakea stenocarpa. *Br. Prodr. Suppl. p.* 29.

Hab. New Holland, Swan River Colony. *Mr. Fraser.*

This is remarkable for the long and much acuminated capsules, and the strong margin and costa to the narrow leaves.

Fig. 1. Portion of a leaf:—*magnified.*

TAB. CDXLV.

Hakea intermedia. *n. sp.*

Foliis circumscriptione ovali-oblongis basi cuneatis marginibus grosse spinoso-dentatis nitidiusculis obscure penninerviis, ramis ferrugineo-tomentosis, capsulis ovatis acuminatis gibbosis apice compressis bicalcaratis intus lævibus.

Hab. King George's Sound. *Mr. Baxter.*

A copiously branched plant with crowded foliage. It appears to be intermediate between *H. ilicifolia* and *H. nitida*, Br., having the downy branches of the former, and the fruit, internally smooth, like the latter.

TAB. CDXLVI.

Xylomelon occidentale. *Br.*

Foliis subellipticis, inferioribus rami floriferi passim dentatis, superioribus integerrimis, paginis omnium subsimilibus opacis utriusque epidermide glandulifera, perianthiis extus rachique tomento appresso incanis, stylo floris hermaphroditi longitudinaliter lanato. *Br.*

Xylomelon occidentale. *Br. Prodr. Suppl. p.* 31.

Hab. Baie de Géographe, South-western shores of New Holland. *Mr. Fraser.* Swan River Colony. *Mr. Jas. Drummond.*

This is a second species of *Xylomelon*, described by Mr. Brown; the original *X. pyriforme* seems to be confined to the Eastern Coast.

TAB. CDXLVII.

Hakea undulata. *Br.*

Foliis obovatis tri-(v. septem-) nervibus reticulato-venosis undulatis spinoso-dentatis, capsulis ecalcaratis ventricosis, (floribus minutis glaberrimis). *Br.*

Hakea undulata. *Br. Prodr. p.* 384.

Hab. New Holland, South coast. *Brown.* King George's Sound. *Mr. Baxter.*

Whole plant glabrous. Besides the three principal nerves, there are 2 or more frequently 4 others, which are parallel with them, not indeed equally originating at the base, but giving the foliage the appearance of being, at first sight, rather 7-than 3-nerved. The flowers are very small, and when dry become black.

Fig. 1. Small portion of a flowering branch; *nat. size.* *f.* 2. Flower scarcely expanded. *f.* 3. Flower fully expanded:—*magnified.*

TAB. CDXLVIII.

Carex filifolia. *Nutt.*

Dioica, spica solitaria simplici superne attenuata; masc. squamis late ovatis obtusissimis lateribus involutis; fæm. squamis latissimis scariosis truncatis involutis fructum subæquantibus, fructibus ovatis obtusissime triangulatis apiculatis, seta hypogyna stricta fructu breviore, stigmatibus 3.

Carex filifolia. *Nutt. Gen. Am.* 2. *p.* 204. *Dewey Caricogr. in Sill. Journ. v.* 11. *p.* 150, *and v.* 12. *p.* 296. *tab. P. f.* 50. *Gray, N. Am. Cyp. p.* 405. *Schwein. et Torr. Car. in Ann. Lyc. N. York, v.* 1. *p.* 298. *Br. in Rich. App. Frankl. Journ. ed.* 2. *p.* 35. *Boott, in Hook. Fl. Ber. Am. v.* 2. *p.* 208.

Kobresia globularis. *Dewey Caricogr. l. c. v.* 29. *p.* 253.

Uncinia breviseta. *Gray, N. Am. Cyp. p.* 428.

Hab. Dry plains and gravelly hills of the Missouri. *Nuttall. Bradbury* (*in Herb. Hook.*) Woody country of Arctic America. *Dr. Richardson.* Rocky mountains. *Drummond.*

In habit allied to our well-known *Carex dioica*, but extremely different in the scales and fruit. In this species, too, there is an hypogynous seta, (though short and not uncinate), as in the genus *Uncinia*, so that it has perhaps as strong a claim to be placed as by Dr. Asa Gray in that genus, as in *Carex*. That able Botanist had not the opportunity of seeing authentic specimens of Nuttall's *C. filifolia*, and he considered Dr. Richardson's specimens distinct. But there can be no question of their identity.

Fig. 1. Male flower, with the scale, inner view. *f.* 2. Female flower, with the scale, outer view. *f.* 3. Inner view of ditto. *f.* 4. Fruit. *f.* 5. Achenium, with the hypogynous scale:—all *magnified.*

Tab CDXLVIII.

TAB. CDXLIX.

Physurus vaginatus. *n. sp.*

Caule elongato folioso, foliis remotis oblongo-ovatis petiolatis, petiolo basi membranaceo inflato vaginato, spica terminali oblonga densiflora glabra, bracteis ovatis acuminatis, sepalis petalisque oblongis labello trilobo lobo medio ovato-acuminato apice reflexo, cornu libero ventricoso sepalis breviore.

Hab. Guatemala. *G. U. Skinner, Esq.*

Radix fibrosa, fibris villosis crassiusculis. Caulis erectus, spithamæus, fere ad pedalem, foliosus. Folia remota, oblongo-ovata, acuminata, tenui-membranacea, petiolata, 5-9-nervia, nervis venulis connexis, petiolis brevibus basi insigniter dilatata, vaginata, inflata, tenuissime membranacea, hyalina, striata. Spica terminalis, oblonga, multiflora. Bracteæ, inferiores sæpe vacuæ, late ovatæ, acuminatæ, hyalino-membranaceæ, longitudine ovarii. Flores glaberrimi; sepala oblonga, dorsale cum petalis oblongis agglutinatum. Labellum perianthio brevius, basi calcaratum, trilobum, lobis lateralibus rotundatis, intermedio majore, ovato, acuminato, acumine recurvo. Calcar labello brevius, liberum, apice incrassatum. Columna brevis, anthera rostelloque ovatis acutis.

Fig. 1. Side view of a flower and bractea. *f.* 2. Front view of ditto. *f.* 3. Upper, and *f.* 4, under side of the labellum, (the spur being removed). *f.* 5. Column. *f.* 6. Rostellum and anther. *f.* 7. Pollen-masses:—all *magnified*.

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TAB. CDL.

Fuchsia cordifolia. (*Benth.*) β.

Caule glabro, foliis oppositis v. ternatim verticillatis longe petiolatis late cordatis (ovatisve) denticulatis minute puberulis subtus subglabris, pedicellis axillaribus unifloris folio brevioribus, calycis pubescentis longe tubulosi laciniis petala ovata brevissime acuminata subduplo superantibus. *Benth.*

Fuchsia cordifolia. *Benth. Pl. Hartweg. p.* 74. *n.* 528. *Lindl. Bot. Reg.* 1841. *t.* 70.

β. foliis ovatis. (Tab. Nostr. CDL.)

Hab. Guatemala. *G. U. Skinner, Esq.* On Zetuch, a volcano in the same country, at an elevation of 10,000 feet above the level of the sea. *Hartweg.*

It is so long since I had the impressions printed of the plate of this fine species of *Fuchsia* from Mr. Skinner's specimen, that it has now been introduced to our gardens, and has recently been published, both from Hartweg's dried specimens and from those that have flowered in our green houses. Our plant indeed does not deserve the name of *cordifolia*, the leaves being decidedly ovate, not heart-shaped, whence I have thought it better to consider this a variety.

TABS. CDLI. CDLII.

Sinclairia discolor, *Hook. et Arn.*

Sinclairia, *Hook. et Arn.*—Gen. Char. *Capitulum* multiflorum radiatum: *fl.* radii ligulatis, fœmineis; *disci* hermaphr. 5-fidis, lobis linearibus, æqualibus, demum revolutis, apicibus hirsutulis. *Receptaculum* nudum. *Involucrum* campanulatum, squamis imbricatis appressis, interioribus brevibus ovatis. *Antheræ* disci ecaudatæ, filamentis levibus. *Styli rami* elongati, fere subulati; *disci* breviores, lobos corollæ vix superantes, subhispiduli, obtusiusculi. *Achenium* breve, glabrum, angulatum. *Pappus* fulvus, biserialis; *serie externâ* paleaceâ, brevi; *internâ* elongatâ, setiformi, scabrâ, rigidâ, fragili.—Frutex *glaber* (*vel* arbor?) *Mexicanus.* Rami *fere ad apices lignosi.* Folia *opposita, longe petiolata, integerrima, rhomboidea, brevi-acuminata, trinervia, supra viridia, subtus albissima, nervis atro-fuscis.* Petioli *graciles, basi dilatati, amplexantes.* Panicula *terminalis, thyrsoidea, speciosa.* Flores *lutei.*

Sinclairia *discolor*, *Hook. et Arn. in Bot. of Beech. Voy. p.* 433.

Hab. Realejo, Guatemala, on the shores of the Pacific. *Dr. Sinclair.*

In the Botany of the voyage of Capt. Beechey, Mr. Arnott and myself dedicated this plant, which we consider an entirely new genus, to our excellent friend Dr. Sinclair, who, in the surveying voyage of H. M. S. Sulphur, on the Pacific side of S. America, employed his leisure in collecting the vegetable productions of the countries he visited. We place *Sinclairia* among the *Vernoniaceæ*, near the genera *Hectoria* and *Andromachia.* The flowers are nearly an inch in diameter; leaves 4-5 inches long, and almost as much broad, beneath quite white (but neither tomentose nor farinose,) beautifully marked with the dark brown nerves.

Fig. 1. Capitulum, *f.* 2. Floret from the disk. *f.* 3. Portion of the external series of the pappus. *f.* 4. Floret of the ray. *f.* 5. Hair from the inner series of the pappus. *f.* 6. Upper part of a corolla of the disk laid open to show the stamens:—*all magnified.*

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TABS. CDLIII. CDLIV.

Etaballia Guianensis.

Gen. Char. *Calyx* tubulosus, apice breviter 5-dentatus, subbilabiatus. *Petala* 5, ad basin calycis inserta, longissime linearia, æstivatione inflexa, imbricata. *Stamina* 10, monadelpha, alterna breviora. *Antheræ* ovatæ. *Ovarium* sessile, villosum, 2-3-ovulatum. *Stylus* brevis. *Stigma* oblique capitatum. *Legumen* ?—Arbor *ramis ramosissimis glabris.* Folia *simplicia* (*unifoliolata*) *brevissime petiolata, ovata v. ovato-oblonga breviter et acute acuminata, penninervia, coriacea, glabra v. subtus ad venas sparse pubescentia.* Spicæ *florum axillares et terminales densæ.* Bracteæ *ovato-orbiculatæ, concavæ, ante anthesin imbricatæ.* Bracteolæ *minimæ, lanceolatæ.* Flores *sessiles.* Calyx *ferrugineus.* Petala *lutea, omnia inter se subsimilia.* Stamina *calycem æquantia, ultra medium symmetrice monadelpha, tubo integro.*

Etaballia *Guianensis. Benth. in Hook. Journ. Bot.* 2. *p.* 99.

Hab. Abundant at the cataracts of Etabally on the Essequibo river, where it forms a strikingly beautiful tree, almost covered with bright yellow flowers, and is called by the natives *Etabally*, after the name of the cataract. *Schomburgk.*

This is a highly singular plant; being one of the very few *Leguminosæ* which cannot be recognised as belonging to that Order at first sight. It has indeed very much the aspect of an *Inocarpus*; although, on examining the structure of the flowers, it is found to be closely allied to *Schnella* (a genus including most of the small-flowered American *Bauhinieæ*.) The simple foliage without any tendency to bifurcation of the midrib is rare; but is met with in a few other species of the *Bauhinieæ*.

The supposed second species, mentioned in the work above quoted, under the name of *E. macrophylla*, must be suppressed, having originated in a mistake.

The drawing was made by Dr. Joseph Hooker, of H. M. surveying ship *Erebus*. *Bentham.*

Fig. 1. Flower. *f.* 2. Stamens. *f.* 3. Staminal tube cut open, showing the ovary. *f.* 4. Section of the ovary:—*all magnified.*

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TAB. CDLV.

Ocimum bracteosum.

Caule herbaceo erecto piloso-hispido, foliis breviter petiolatis oblongo-lanceolatis acutiusculis remote serratis basi angustatis supra glabriusculis subtus hispidulis, floralibus bracteæformibus, calyce 2-3-plo longioribus coloratis, calyce fructifero reflexo ovato subinflato dente supremo ovato breviter decurrente, lateralibus ovatis breviter mucronatis, infimis longe subulatis, filamentis edentulis.

Ocimum bracteosum. *Benth. Lab. Gen. et Sp. p.* 14.

Hab. In the fields of Lambsar in Senegambia. *Leprieur and Perottet.*

This and the nine following plates illustrate some of the genera of *Ocimoideæ*, a tribe of *Labiatæ* consisting chiefly of tropical species, and readily distinguished by their stamina, which instead of ascending under the upper lip of the corolla in pairs as in most *Labiatæ*, or spreading in all directions as in *Menthoideæ*, are turned downwards, and lie on the lower lip; a circumstance which induced the older authors to consider the flowers as resupinate. The anthers, moreover, sooner or later after they have shed their pollen, open out into an orbicular or reniform apparently unilocular disk, the two cells being always confluent. The genus *Ocimum*, as now limited, is distinguished from others of the tribe by the decurrent margins of the upper tooth of the calyx, the flat lower lip of the corolla, and from *Orthosiphon* by the style bifid at the apex with pointed lobes and minute or marginal stigmatic surfaces. *O. bracteosum* belongs to the section *Gymnocimum*, in which the filaments are entirely without appendages at the base. *Bentham.*

Fig. 1. Flower. *f.* 2. The same cut open. *f.* 3. Calyx at the maturity of the fruit. *f.* 4. Upper portion of the style. *f.* 5. Anthers. *f.* 6. Carpel. *f.* 7. Seed:—*all magnified.*

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TAB. CDLVI.

Acrocephalus capitatus.

Caule procumbente foliisque ovatis subglabris, calycis labio inferiore 4-dentato.

Prunella indica. *Burm. Fl. Ind. p.* 130.
Ocimum capitellatum. *Linn. Mant. p.* 276.
Ocimum capitatum. *Roth, Nov. Pl. Sp.* 276.
Acrocephalus capitatus. *Benth. Lab. Gen. et Sp. p.* 23.
Hab. Common in moist situations over the greater portion of East India, in the Burman Empire, in Java, and, according to *Willdenow*, in China.

This little plant has much the appearance of an *Escholtzia* and in some respects approaches that genus in character. The decidedly declinate stamens have, however, placed it amongst *Ocimoideæ*, where, with a Javanese plant (probably a mere variety) and a Madagascar species, distinguished by the entire lower lip of the calyx, it forms a genus differing from *Ocimum*, *Geniosporum* and *Moschosma* in the form of the calyx, and more especially in inflorescence, and from all other *Ocimoideæ* by the all but regular corolla. The calyx is tubular, as in several *Geniospora;* but in the latter genus the lateral teeth are more or less connected with the upper one into an upper lip, whilst in *Acrocephalus* the four lower teeth form the lower lip, leaving the upper tooth solitary. *Bentham.*

Fig. 1. Flower. *f.* 2. Ripe calyx. *f.* 3. Corolla cut open. *f.* 4. Upper portion of the style. *f.* 5. Bract. *f.* 6. Carpel :— *all magnified.*

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TAB. CDLVII.

Marsypianthes hyptoides.

Hyptis Chamædrys. *Willd. Sp. Pl.* 3. *p.* 85. *Poit. Ann. Mus. Par.* 7. *p.* 468.
H. pseudochamædrys. *Poit. Ann. Mus. Par.* 7. 469.
H. inflata. *Spreng. Syst.* 2. *p.* 731.
H. lurida. *Spreng. l. c.*
Marsypianthes hyptoides. *Mart. in Benth. Lab. Gen. et Sp. p.* 64.
Hab. A very common weed, especially near the sea, in the greater part of tropical America, from Mexico to Guayaquil on one coast, and to South Brazil on the other.

This species varies much in aspect, but the different forms can hardly be considered as distinct species. It constitutes alone a genus, with the habit and general character of the capitate *Hyptides*, but differing from them in the broadly campanulate calyx, and especially in the very singular form of the carpels, the margins of which are expanded into a membranous wing, with the edges toothed and bent inwards, so as to give to the whole carpel a kind of boat shape. The flower is precisely that of a *Hyptis*. *Bentham.*

Fig. 1. Flower. *f.* 2. Corolla cut open. *f.* 3, 4. Anthers. *f.* 5. Upper portion of the style. *f.* 6. Mature calyx. *f.* 7. Fruit, as enclosed in the calyx. *f.* 8. Single carpel viewed from behind. *f.* 9. The same seen in front. *f.* 10. Section of the same:—*all magnified.*

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TAB. CDLVIII.

Hyptis verticillata.

Suffruticosa, ramis erectis pubescentibus v. pilosis, foliis breviter petiolatis lanceolatis acutis serratis basi rotundato-angustatis tenuissime pubescentibus, verticillastris laxiusculis plurifloris distinctis racemosis, calycis ovati glabri dentibus erectis ovato-lanceolatis.

Hyptis verticillata. *Jacq. Ic. Rar.* 1. *t.* 113. *Benth. Lab. p.* 130.
Mentha hyptiformis. *Lam. Dict.* 4. *p.* 110.
Stachys patens. *Swartz.*
Hab. Common on the roadsides, in various parts of the warmer regions of Mexico, in St. Domingo, and perhaps some other of the West Indian Islands.

The genus *Hyptis*, together with the small allied genera, *Peltodon*, *Marsypianthes*, and *Eriope*, consists entirely of American species, and is readily known among *Ocimoideæ* by the pouch-shaped hanging lower division of the corolla, attached by so narrow a base that it appears often almost articulate. It is one of the most extensive in the Order, as there are above 220 species known; most of them natives of the lower mountainous regions of South America, and a few of them exceedingly common wherever cultivation has commenced under the tropics in the new world and even in the old world, where they have probably been introduced by man. There is a very great diversity in habit, but little in structure of the flower, in the different species which have been distributed into nineteen sections founded chiefly on inflorescence. The *H. verticillata* belongs to the fifteenth section *Minthidium*, consisting of herbs or undershrubs, with the flower-cymes sessile or nearly so, many-flowered, and condensed into verticillasters as in the majority of *Labiatæ*, the calyx regular, the corolla scarcely protruding from it, and the bracts inconspicuous. The species have thus very much the appearance of *Menthæ*, in everything but the corolla and stamens. *Bentham.*

Fig. 1. Flower. *f.* 2. The same cut open. *f.* 3, 4. Anthers. *f.* 5. Upper portion of the style. *f.* 6, 7. Carpels:—*all magnified.*

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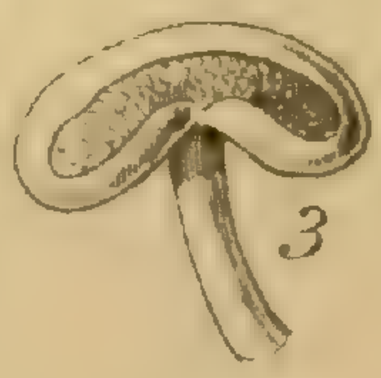

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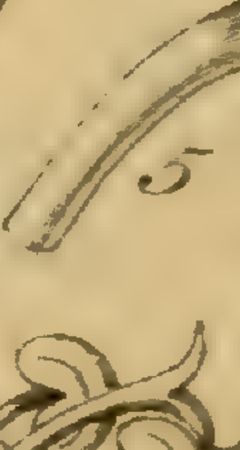

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TAB. CDLIX.

Orthosiphon rubicundus.

Caulibus cæspitosis basi foliosis ramosis, foliis oblongo-ovatis grosse dentatis basi angustatis infimis petiolatis, superioribus sessilibus, corollæ tubo rectiusculo, calyce duplo longiore, fauce subæquali, staminibus corollâ parum brevioribus.

Orthosiphon rubicundus. *Benth. Lab. Gen. et Sp. p.* 26.
Plectranthes rubicunda. *Don, Prod. Fl. Nep. p.* 116.
Lumnitzera rubicunda. *Spreng. Syst. Cur. Post. p.* 223.

Hab. Along the mountainous regions of North India, from the Kheesee Pass? at the entrance of Deyra Dhoun (*Royle*), to the Burmese territory. *Wallich.*

The genus *Orthosiphon* has much of the habit, the calyx, and most of the characters of *Ocimum*; but the tube of the corolla is usually longer, and the apex of the style, instead of being divided into two linear pointed lobes, is almost entire and capitate, with a terminal stigmatic surface. The species are all Asiatic or African, excepting a remarkable one, contained in the South American herbarium transmitted by Pavon to the late Mr. Lambert, but of which the precise station is as yet unknown. *Bentham.*

Fig. 1. Flower. *f.* 2. Corolla cut open. *f.* 3, 4. Anthers. *f.* 5. Upper portion of the style (represented too much flattened.) *f.* 6. Mature calyx. *f.* 7. Fruit. *f.* 8. Single carpel. *f.* 9. Floral leaf:—*all magnified.*

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TAB. CDLX.

Plectranthus ternifolius.

Tomentoso-villosus, caule erecto subramoso, foliis ternatim verticillatis subsessilibus lanceolato-oblongis acuminatis serratis basi cuneatis rugosis, paniculis ramosis densis pyramidatis multifloris, calycibus fructiferis cylindricis erectis striatis æqualiter 5-dentatis.

Plectranthus ternifolius. *Don, Prod. Fl. Nep.* 117. *Benth. Lab.* 44.

Ocimum ternifolium. *Spreng. Syst. Cur. Post. p.* 224.

Hab. On the roadsides, in the damp wooded regions along the Himalaya, from Kamaon to the Burmese territory.

Plectranthus, one of the largest genera of Asiatic *Ocimoideæ*, is distinguished from *Ocimum* by the concave lower division of its corolla, and from *Coleus* by the stamens not connected into a tube. It varies in habit and calyx, as well as in the form of the tube of the corolla, from which characters it has been divided into seven sections. To these ought perhaps to be added three more, *Anisochilus*, *Æollanthus* and *Pycnostachys*, genera which have been founded merely upon peculiarities in the form of the calyx. The *P. ternifolius*, along with a closely allied South African species, forms the section *Pyramidium*; characterised by an erect, tubular or ovate, equally 5-toothed calyx (in the fruit-bearing state), a straight corolline tube, and a dense pyramidically paniculate inflorescence. *Bentham.*

Fig. 1. Flower. *f.* 2. Corolla cut open. *f.* 3. Stamen. *f.* 4. Anther seen from the back. *f.* 5. Upper portion of the style. *f.* 6. Ovary. *f.* 7. Single carpel seen from the side:—*all magnified.*

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TAB. CDLXI.

Eriope macrostachya.

Fruticosa, ramis pubescentibus villosisve, foliis petiolatis ovato-lanceolatis acutis denticulatis basi rotundatis subcordatisve rarius cuneatis rugosis utrinque villosis, panicula ampla ramosa.

Eriope macrostachya. *Mart. in Benth. Lab. Gen. et Sp. p.* 145.

Hab. Elevated *Campos*, and woods of the mining districts in Brazil. *Martius and others.*

The essential character, derived from the corolla, is very nearly the same in *Eriope* as in *Hyptis*, and the affinity with the section *Hypenia* of that genus is certainly very close. Yet the peculiar form of the mature calyx, bilabiate and closed at the mouth with hairs, appears constant; as is also the inflorescence, the flowers being solitary and opposite as in *Scutellaria*, forming leafless simple or paniculately branched racemes. There are about fifteen species known, all Brazilian. *Bentham.*

Fig. 1. Flower. *f.* 2. Calyx cut open. *f.* 3. Corolla cut open. *f.* 4, 5. Stamens. *f.* 6. Ovary and style:—*all magnified.*

TAB. CDLXII.

Geniosporum strobiliferum.

Caule erecto ramoso, foliis subsessilibus ovato-oblongis v. ovato-lanceolatis utrinque angustatis supra hispidulis subtus glabriusculis, verticillastris multifloris in apice ramorum spicatis infimis subremotis, foliis floralibus ovatis acuminatis flores superantibus, calycibus subsessilibus, fructiferis erectis striatis basi transverse rugosis, ore membranaceo irregulariter 5-dentato.

Geniosporum strobiliferum. *Wall. Pl. As. Rar.* 2. *p.* 18. *Benth. Lab. p.* 20.

Hab. In North India, along the whole range of the Himalaya.

The corolla of *Geniosporum* is the same as that of *Ocimum* and *Moschosma*, but the upper lobe of the calyx is not large and decurrent as in *Ocimum*, and *Moschosma* has a clavate style. The habit of *Geniosporum* is different from that of any of the allied genera. The verticillasters are dense and many-flowered, the upper floral leaves and summits of the calyces are frequently white or coloured, and the ripe calyx is usually marked with transverse reticulations at its base. *Bentham.*

Fig. 1. Flower. *f.* 2. Corolla cut open. *f.* 3. Anthers. *f.* 4. Upper portion of the style. *f.* 5. Mature calyx. *f.* 6. Fruit. *f.* 7. Single carpel :—*all magnified.*

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TAB. CDLXIII.

Hyptis Salzmanni.

Fruticosa, ramis foliatis patentim pilosis, foliis petiolatis ovatis obtusis eroso-crenatis rugosis pubescentibus subtus pallidis, panicula laxissima subnuda glaberrima glauca, ramis elongatis, pedunculis filiformibus 1-3-floris, calycibus campanulatis venosis, dentibus æqualibus acutis, corollæ tubo calyce subduplo longiore.

Hyptis Salzmanni. *Benth. Lab. Gen. et Sp. p.* 138.

Hab. Along the Rio San Francisco, from the province of Minas Geraes to its mouth, and in various parts of the province of Bahia.

This species belongs to the section *Hypenia*, remarkable for its peculiar habit, the lower portion of the plant being invariably clothed with long spreading hairs, whilst the panicle is always perfectly smooth, and more or less glaucous. The inflorescence approaches that of *Eriope*, and in some species the great length of the tube of the corolla alters much the appearance of the flower; yet these characters are so ill-defined and connected by so many intermediate states with more ordinary forms of *Hyptis*, that it would be highly inconvenient to adopt them as generic distinctions. Many of the species are very handsome, with scarlet flowers above an inch in length. *Bentham.*

Fig. 1. Flower. *f.* 2. Mature calyx. *f.* 3. Corolla cut open. *f.* 4. Anther. *f.* 5. Upper portion of the style. *f.* 6. Fruit. *f.* 7. Single carpel:—*all magnified.*

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TAB. CDLXIV.

Plectranthus scrophularioides.

Caule herbaceo erecto ramoso subglabro, foliis longe petiolatis lato-ovatis crenatis basi rotundatis inæqualiter cordatis v. subcuneatis, floralibus bracteisque minutis, paniculis laxis, calycibus fructiferis declinatis profunde bilabiatis inflatis, labio superiore adscendente tridentato inferiore concavo porrecto breviter bidentato, dentibus omnibus obtusis, corollis inflatis supra gibbis calyce subtriplo longioribus, staminibus exsertis.

Plectranthus scrophularioides. *Wall. Pl. As. Rar.* 2. *p.* 16. *Benth. Lab. p.* 40.

Hab. North India, along torrents in Nepal and Kamaon. *Wallich.*

The section of *Plectranthus*, to which this plant belongs, was established by Schrader as a genus, under the name of *Isodon*; the teeth of the calyx, in the species which he described, being nearly equal and scarcely bilabiate, even at maturity. The name, having been thus applied, was adopted for the section, although not so suitable to the majority of its species, in which the calyx is more or less decidedly bilabiate. In the *P. scrophularioides* it is deeply so. The true character of the section consists in the lateral teeth of the calyx being more or less connected with the upper one, not with the lower ones as in *Coleoides*, in the want of that spur to the corolla which distinguishes *Germanea* and *Melissoides*, and the ripe calyx being declinate, not erect as in *Pyramidium* and *Amethystoides*. *Bentham.*

Fig. 1. Flower. *f.* 2. Corolla cut open. *f.* 3. Mature calyx. *f.* 4. Anther. *f.* 5. Upper portion of the style. *f.* 6. Fruit. *f.* 7. Single carpel:—*all magnified.*

Tab. CDLXIV.

TAB. CDLXV.

Ilex affinis. *Gardn.*

Glaberrima, foliis oblongo-lanceolatis utrinque attenuatis supra medium obtuse et distanter serratis inferne integerrimis, racemis 2-3 axillaribus paniculatis densifloris, calyce glabro.

Ilex affinis. *Gardn. Herb. Bras. n.* 3086.

Hab. In wooded ravines in the Serra de Natividade, province of Goyaz, Brazil. January, 1840.

This species is nearly related to the *Ilex Paraguayensis*, (see Journ. of Bot. Tab. I. and II.), but is readily distinguished, both in the living and dried state, by its very thick coriaceous leaves, which are also more obtusely and distantly serrated, and less cuneated; and by its more numerous and more densely flowered racemes. This is the most northern species I have met with in Brazil, and although not uncommon about the Villa de Natividade, I have never seen its leaves collected to be made into tea. In my Goyaz collections there is another species, with much broader, shorter and nearly entire leaves, shorter and fewer-flowered racemes, and with flowers nearly twice as large. It may be characterized as follows:

Ilex *rivularis*; glaberrima, foliis obovatis obtusis versus apicem obscure crenato-serratis basi acutis, racemis 2-4 axillaribus vix petiolo duplo longioribus, pedicellis unifloris, calyce pubescente, drupis (siccis) 4-sulcatis.

Ilex rivularis. *Gardn. Herb. Bras. n.* 3085.

Hab. In woods by the sides of streams near Villa de Natividade, province of Goyaz, Brazil. January, 1840.

Frutex 10-15 pedalis, glaberrimus, ramulis pauce angulatis. *Folia* 4-4½ poll. longa, 2 circiter lata. *G. Gardner.*

Fig. 1, 2. Flowers. *f.* 3. Pistil, and the corolla laid open :— *magnified.*

TAB. CDLXVI.

Tapura ciliata. *Gardn.*

Foliis oblongis obtusis versus basi subcuneatis supra glaberrimis subtus villosis margine revolutis dense villoso-ciliatis, petiolis floriferis, floribus in glomerulum dense aggregatis sessilibus.

Tapura ciliata. *Gardn. Herb. Bras. n.* 3087.

Hab. Rare in dry, open woods between the Mission of Duro, and Villa de Natividade, in the province of Goyaz, Brazil. January, 1840.

Arbor 12-16 pedalis ramosissima. *Ramuli* fusco-tomentosi. *Folia* coriacea, alterna, petiolata, oblonga, obtusa, basi subcuneata, supra glaberrima, subtus villoso-tomentosa, margine revoluta, dense ciliata. *Petioli* breves, villosi, apice floriferi. *Stipulæ* parvæ, triangulares, deciduæ. *Pedicelli* cum petiolo concreti. *Flores* flavi, in apice petioli dense aggregati, sessiles. *Calyx* basi 3-bracteatus, 5-partitus, lobis inæqualibus, ovatis, obtusis, villosis. *Corolla* gamopetala imo basi calycis concreta, tubo intus villoso, limbo subbilabiato, labio superiore 2-lobo, lobis late obovatis emarginatis, inferiore 3-lobo, lobis lineari-lanceolatis. *Stamina* 5. *Filamenta* cum petalis cohærentia, iisdem alterna et æquilonga, 3 superiora antherifera, 2 inferiora sterilia. *Antheræ* introrsæ, oblongæ, biloculares, longitudinaliter dehiscentes. *Stylus* filiformis, villosus, exsertus. *Stigma* trilobum. *Ovarium* ovato-trigonum, triloculare.

This species of *Tapura* is very distinct from that figured by Aublet at Tab. 48 of his Plant Guian., which has hitherto been the only known species of the genus. The Brazilian one is readily distinguished by its densely ciliated leaves, and the greater number of its flowers. The structure of the corolla is also different from that of the plant of Aublet. The upper lip of the latter has only one lobe, and the lower two; whereas in mine the upper lip has two broad emarginate lobes, and the lower three linear-lanceolate ones, nearly equal in length to the others. In structure the present plant is truly gamopetalous, the filaments forming the bond of union, and consequently alternating with the segments. Aublet says:—"Filamenta 5, duo ad latera labii superioris, duo breviora tubo corollæ sub labio superiori, quintum longissimum ad basin labii inferioris." Judging from what is to be seen in my plant, I should imagine that Aublet has not correctly defined the position of the stamina.—*G. Gardner.*

Fig. 1. Single flower and bracteas. *f.* 2. Corolla laid open. *f.* 3. Ovary. *f.* 4. Hypogynous gland:—*magnified.*

Tab. CDLXVI.

TAB. CDLXVII.

Adiantum calcareum. *Gardn.*

Frondibus pinnatis glabris, pinnis dissimilibus, superioribus dimidiatis subtriangularibus basi truncatis margine superiore incisis, inferioribus flabellatis profunde incisis, laciniis emarginatis basi acutis vel subcordatis, indusiis lævibus, rachi glabra apice sæpe nuda elongata radicante.

Adiantum calcareum. *Gardn. Herb. Bras. n.* 3551.

Hab. In clefts of calcareous rocks near Natividade, province of Goyaz, Brazil. December, 1839.

Frondes fasciculatæ. *Stipes* subpollicaris, atropurpureus, teres, nitidus, subpaleaceus. *Rachis* teres, glabra, in apice frondis sæpe nuda, elongata, extremitate demum radicante. *Frons* 4-6 pollicaris, pinnata. *Pinnæ* fere semipollicares, alternæ, brevissime petiolatæ, superiores dimidiatæ, subtriangulares, basi truncatæ, margine superiore incisæ; inferiores flabellatæ, profunde inciso-lobatæ, laciniis emarginatis, basi acutæ vel subcordatæ. *Venæ* radiatæ, pluries furcatæ, venulis parallelis. *Sori* marginales, oblongi. *Indusia* oblonga, membranacea, glabra.

This species of *Adiantum* comes near *A. caudatum*, Linn., but differs in being a much smaller plant, thinner in texture, and smooth. The pinnæ are also shorter, broader, more deeply incised, and less recurved than they are in *A. caudatum*. The fronds of both species are occasionally radicant at their apices; and sometimes the lower pinnæ in *A. caudatum* assume the rounded flabellate form, which in the present plant proceeds half-way up the rachis. *G. Gardner.*

Fig. 1. Lower pinna. *f.* 2. Sorus; the indusium laid open:—*magnified.*

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TAB. CDLXVIII.

Achimenes multiflora. *Gardn.*

Annua tota hirsuta erecta, foliis petiolatis oppositis ternisve ovatis acutis basi obtusis argute subduplicato-serratis, pedunculis axillaribus 3-5 floris infimis elongatis supremis subsessilibus, calycis lobis linearibus erectis dense hirsutis, corollæ tubo infundibuliformi hinc basi gibbo, lobis rotundatis.

Achimenes multiflora. *Gardn. Herb. Bras. n.* 3873.

Hab. On dry banks in woods on the Serra de Santa Brida, and near Villa de Arrayas, in the province of Goyaz, Brazil.

Herba annua, tota hirsuto-villosa, 1-1½ pedalis. *Caules* simplices. *Folia* 2½-3 poll. longa, pollicem circiter lata, opposita vel raro verticillata. *Petioli* 4-6 lineam longi. *Pedunculi* axillares, 3-5 flori. *Pedicelli* erecti, *corolla* dimidio breviores. *Calycis tubus* ovario adnatus, limbus 5-partitus, lobis linearibus obtusis. *Corolla* pallide purpurea, glabra, tubuloso-infundibuliformis, basi postice hinc gibba, limbo irregulariter bilabiato, 5-fido, lobo medio labii inferiore subdenticulato, lobis reliquis integris rotundatis. *Stamina* 4 didynama, antheris inter se cohærentibus. *Annulus* perigynus integer. *Stylus* apice bifidus, lobis latis obtusis intus stigmatiferis. *Ovarium* villosissimum.

The corolla of this pretty little plant is almost that of *Gloxinia*, but the bifid stigma and entire annulus prove it to be a species of *Achimenes*. It is probably allied to *A. hirsuta*, *DC.*, which is also Brazilian. *G. Gardner.*

TAB. CDLXIX.

Tapina villosa. *Gardn.*

Herbacea simplex erecta villosa, foliis ovatis vel ovato-oblongis utrinque obtusis vel acutiusculis grosse serratis supra dense pilosis subtus præcipue ad nervos villosis, pedunculis axillaribus 1-floris, calycis tubo brevi, lobis 5 lanceolatis, corollæ tubo brevi hinc basi gibbo.

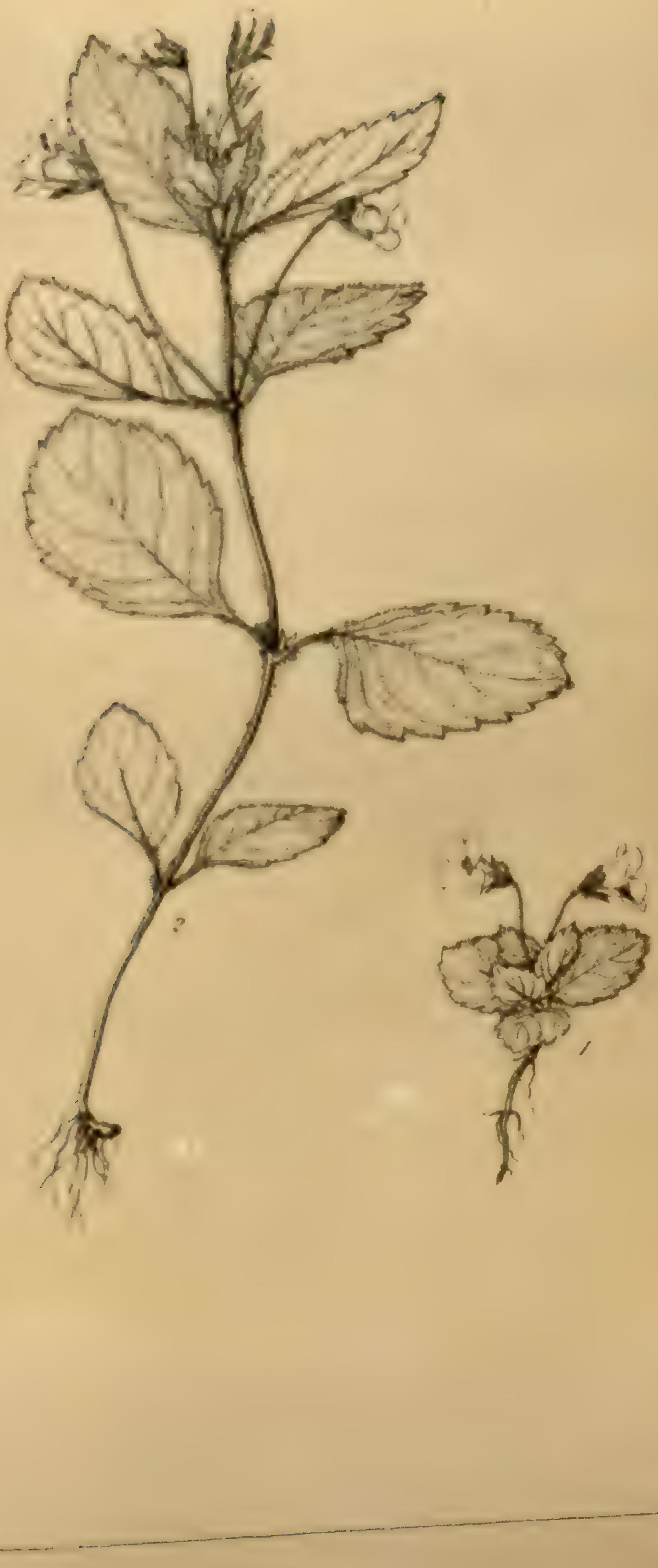
Tapina villosa. *Gardn. Herb. Brasil. n.* 3875.

Hab. In dry clefts of rocks near the summit of the Serra de Natividade, in the north of the province of Goyaz, Brazil, February, 1840.

Herba pusilla, 1-5 uncialis, tota villosa, villi articulati. *Radix* carnosa, squamosa, fibrosa, fibrillis villosis, fuscis. *Caules* solitarii, simplices. *Folia* 1-1½ poll. longa, 8-9 lin. lata. *Pedunculi* axillares, solitarii, uniflori, internodo longiores. *Calyx* liber, 5-partitus, lobis subæqualibus, lanceolatis. *Corolla* hypogyna, infundibuliformis, tubo brevi purpurascente, basi postice gibbo, limbo albo, quinquefido, subæqualiter patente, lobis obtusis. *Stamina* 4, didynama, cum quinto rudimentario. *Filamenta* glabra. *Antheræ* ovatæ, basi cordatæ, cohærentes. *Annulus* hypogynus integer, postice in glandulam tumens. *Ovarium* ovatum, villosum. *Stylus* simplex, apice subincrassatus. *Stigma* capitato-bilobum. *Fructus* non vidi.

This little plant agrees with the characters of *Tapina* in every thing except the form of the corolla, which has a shorter and more regular tube than the species described and figured by Martius in the Nov. Gen. et Sp. Plantarum. In one of the flowers which I examined of this plant, I found the fifth filament bearing a perfect anther, which cohered with the other four.—*G. Gardner.*

Fig. 1, 2. Specimens of Tapina villosa: —*nat. size.*



TAB. CDLXX.

Echites pulchella. *Gardn.*

Suffruticosa, erecta, glaberrima, foliis oblongo-lanceolatis acutis basi subcuneatis, pedunculis valde elongatis 4-6-floris, calycis laciniis subulatis.

Echites pulchella. *Gardn. Herb. Bras. n.* 3886.

Hab. In a moist upland *campo* near Villa de Arrayas, province of Goyaz, Brazil. March, 1840.

This very rare species of *Echites* is a suffruticose plant, about a foot and a half high, glabrous in all its parts. *Leaves* 2 2½ inches long, and from 4 to 6 lines broad, opposite, oblong-lanceolate, acute, narrowed towards the base, with a slightly thickened margin. *Flowers* 4-6 on a peduncle which is more than half the length of the whole plant. *Pedicels* 4-6 lines long. *Calyx* small, 5-parted: segments subulate. *Corolla* infundibuliform, scarlet; tube about three quarters of an inch long, contracted a little at the apex; segments oblong-lanceolate, acute, spreading. *Stamens* inserted on the tube of the corolla near its base. *Filaments* short, villous. *Anthers* sagittate, cohering by their middle to the *stigma*. *Fruit* not seen.—*G. Gardner.*

TAB. CDLXXI.

Ipomæa (Orthipomæa) neriifolia. *Gardn.*

Fruticosa, ramosa, erecta, foliis confertis vix petiolatis longe linearibus utrinque attenuatis margine revolutis pellucido-punctatis hirsutis, pedunculis subtrifloris, calycis piloso-pubescentibus laciniis inæqualibus late oblongis obtusis, corollæ tubo infundibuliformi limbo patente parum lobato.

Ipomæa neriifolia. *Gardn. Herb. Bras. n.* 3906.

Hab. Rare in dry exposed places on the Serra de Natividade, province of Goyaz, Brazil, February 1840.

Frutex bipedalis. *Rami* teretes, striati, villoso-tomentosi. *Folia* conferta, alterna, vix petiolata, utrinque attenuata, villosa, pellucido-punctata, punctis rotundatis. *Pedunculi* axillares, villosi, breves, subtriflori. *Pedicelli* pedunculo subæquales. *Calycis* foliola subinæqualia, late oblonga, obtusa, concava, piloso-pubescentia. *Corolla* pallide violacea, tubo infundibuliformi, limbo repando, patente. *Stamina* erecta.

Another species of *Ipomæa*, belonging to the same section, which I possess from a more northern part of the province of Goyaz, may be characterized as follows:

Ipomæa (Orthipomæa) *hirsutissima*: fruticosa, erecta, tota hirsutissima, caule simplici, foliis brevi-petiolatis oblongo-lanceolatis apice acutis cuspidatis basi rotundatis cordatisve, pedunculis axillaribus 1-floris folio triplo brevioribus, pedicellis basi bibracteatis, bracteis magnis foliaceis lanceolatis longe petiolatis, calycis dense hirsuti laciniis lanceolatis acuminatis, corollæ tubo infundibuliformi extus hirsuto limbo patente repando.

Ipomæa hirsutissima. *Gardn. Herb. Bras. n.* 3355.

Hab. In dry upland *campos*, near the Mission of Duro, province of Goyaz, Brazil. Oct. 1839.

Caules plures, vix pedales. *Corolla* roseo-violacea. *Antheræ* erectæ, tubo inclusæ.—*G. Gardner.*

TAB. CDLXXII.

Gloxinia ichthyostoma. *Gardn.*

Annua, caule elongato erecto hirsuto-villoso, foliis subinæquilateris ovatis acutis basi rotundatis vel subcordatis grossè crenato-serratis utrinque hirsutiusculis, pedicellis axillaribus solitariis 1-floris, calycis 5-partiti lobis lineari-lanceolatis patentibus, corollæ tubo infundibuliformi campanulato, limbo subbilabiato, lobo intermedio labii inferioris margine incurvato longeque denticulato-ciliato.

Gloxinia ichthyostoma. *Gardn. Herb. Bras. n.* 3304.

Hab. In shady rocky places on dry calcareous hills near Arrial da Chapada, province of Goyaz, Brazil. January, 1840.

Herbacea, annua, erecta, hirsuta, 1-1½ pedalis. *Caules* simplices. *Folia* opposita, petiolata, 2½-3 poll. longa, 1½-2 pollices lata, subobliqua, grossè crenato-serrata, acuta, basi subcordata. *Petioli* 3 lineas circiter longi, dense hirsuti. *Pedicelli* solitarii, axillares, erecti, internodo triplo breviores. *Calycis tubus* ovario adnatus. *Limbus* 5-partitus, lobis lineari-lanceolatis patentibus. *Corolla* purpureo-violacea, extus pubescens, tubo infundibuliformi-campanulato basi ecalcarato, limbo subbilabiato 5-lobo, lobo intermedio labii inferioris margine incurvato longeque dentato-ciliato. *Stamina* 4, didynama et quintum rudimentarium. *Antheræ* inter se cohærentes. *Glandulæ* 5, perigynæ. *Stylus* versus apicem incrassatus. *Stigma* orbiculato-concavum.

The specific name which I have given to this species of *Gloxinia* was suggested by the very marked resemblance which the middle lobe of the lower lip of its corolla bears to the jaw of a fish. The same appearance exists, but in a slighter degree, in the original *Gloxinia maculata.*—*G. Gardner.*

TABS. CDLXXIII. CDLXXIV.

Cleistes speciosa. *Gardn.*

Labello convoluto truncato emarginato sepalorum longitudine, lamellis infra medium integris.

Cleistes speciosa. *Gardn. Herb. Bras. n.* 4003.

Hab. Marshy places, in upland *campos* near Natividade, and between Natividade and Arrayas, province of Goyaz, Brazil, flowering from January till March.

The following description of this beautiful plant was drawn up from recent specimens.

Herbaceous, 3-4 feet high. *Root* fibrous, fibres succulent. *Stem* erect, fistular, leafy. *Leaves* between succulent and coriaceous, glaucous, finely striated with parallel veins, 5-6 inches long and about an inch and a half broad, oblong-lanceolate, their margins running down and meeting at a little more than an inch below the point where the middle part of the leaf separates from the stem. *Flowers* about 3 inches long, rose-coloured, solitary in the axils of the two or three upper leaves. *Sepals* patent, linear-lanceolate, acute. *Petals* conniving, lanceolate, with a prominent midrib on their internal surface, rose-coloured, but towards the tips sanguineous. *Labellum* free, convolute, oblong-linear, truncate, emarginate. *Crest* spongy, yellowish, towards the base becoming more fleshy, and considerably elevated above the disk. At each side of its base, but seated on the disk, there is a small roundish yellow gland. Like the other segments of the perianth the labellum is rose-coloured, except its upper third, which is of the same colour as the tips of the petals. *Column* clavate, semiterete, white, the upper part of its internal face of a papillose nature and yellowish. *Stigma* infundibuliform, its lateral margins toothed. *Anther* large, fleshy, terminal, operculiform, subbilobed, purple, suspended by a lobed process of the upper part of the back of the column. *Germen* sessile, fleshy, cylindrical, about 2 inches long.

This species is nearly allied to *C. rosea, Lindl.*, but is well distinguished by its truncate and emarginate, not acute, labellum, and by the crest being entire at and below the middle. I possess three other species from Brazil—one from the province of Goyaz, with long narrow leaves, my only specimen of which is too imperfect to be described, and the two following :

Cleistes *montana*, (Gardn. Herb. Bras. n. 5879.) labello sepalorum longitudine trilobo lobis lateralibus lanceolatis acutis intermedio rotundato crispo integro, lamella per medium integra apicem versus denticulata.—Hab. In moist bushy places near the summit of the Organ Mountains, Brazil.

Cleistes *Miersii*, (Gardn. MSS.), labello convoluto oblongo-lanceolato acuminato integerrimo margine undulato sepalorum longitudine, lamellis apicem versus lacerato-denticulatis.—Hab. At Tijuca, in the province of Rio de Janeiro, *John Miers, Esq., G. Gardner.*

Fig. 1. Labellum and column. *f.* 2. Base of the labellum. *f.* 3. Column. *f.* 4. Anther-case : —*magnified.*

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TAB. CDLXXV.

Lindenia acutiflora.

Corollæ limbi laciniis acutis tubo 6-7-ies brevioribus.

Hab. Mexico. Puente-nacional, province of Vera Cruz, *Linden. n.* 358.

This may possibly be a mere variety of the *Lindenia rivalis* figured in the following Plate; but in the specimens we have received from Mr. Linden, as well another presented to us by Mr. Harris, and gathered by Mr. Galeotti, the leaves are very much smaller and more downy, and the divisions of the limb of the corolla are nearly one third less and very much more pointed, although the tube is very nearly of the same length as in *L. rivalis*. *Bentham.*

TAB. CDLXXVI.

Lindenia rivalis. *Benth.*

Gen. Char. *Calycis tubus* turbinatus, 5-costatus; *limbus* 5-partitus, laciniis angustis acutis. *Corolla* hypocrateriformis, tubo longissimo tenui æquali; limbo 5-partito, laciniis oblongis patentibus, æstivatione imbricatis. *Antheræ* 5, lineares, sessiles ad corollæ sinus. *Stylus* filiformis e basi glaber, apice incrassatus, brevissime bifidus, lobis intus stigmatiferis. *Capsula* laciniis calycinis coronata, bilocularis, placentis centralibus. Semina numerosissima angulata.—Frutices *Mexicani.* Folia *opposita, breviter petiolata, oblonga, ad apices ramorum conferta.* Stipulæ *utrinque solitariæ, fusco-membranaceæ, acuminatæ, in vaginam brevem connatæ, deciduæ.* Corymbus *terminalis condensatus pauciflorus.* Bracteæ *lineares.* Flores *subsessiles, albi.*

Lindenia *rivalis;* corollæ limbi laciniis obtusiusculis tubo 4-5-ies brevioribus. *Benth. Pl. Hartw.* 84.

Hab. Southern Mexico; on the banks of the river Teapa, *Linden, Herb. du Sud, n.* 331: Guatemala; on the banks of streams, La Vera Paz, *Hartweg, n.* 581.

This is a shrub of two or three feet high, resembling in many respects the Brazilian genus *Augustea,* but differing in the form of the corolla, of which the tube is long, slender and straight as in *Tocoyena,* without the inflated oblique throat of *Augustea,* the style is also perfectly smooth. In this the original species the leaves become at length nearly smooth and attain the length of three or four inches. The tube of the corolla is about five inches* long, and the divisions of the limb rather more than an inch. ***Bentham.***

* In Planta Hartwegianæ, by a mistake in copying, it is said to be 5 to 5½ *lines,* instead of *inches.*

TAB. CDLXXVII.

Coptophyllum buniifolium. *Gard.*

Gen. Char. *Sporangia* ovata, vasculoso-reticulata, apice breviter radiatim striata, hinc longitudinaliter dehiscentia, biseriata, in laciniis frondis contractæ disposita. *Indusium* nullum. *Sporulæ* subtriangulares, striatæ, glabræ.—Filiculæ *Brasilianæ*, rhizoma *repente*. Frondes *cæspitosæ*, *dissimiles;* sterilis *multifida*, *pinnulis linearibus dichotomis;* fertiles *tripinnatæ*, *pinnulis sporangiferis*, *contractis;* venæ *furcatæ*.—*Gard. in Hook. Lond. Journ. Bot.* 1, *p.* 133.

Coptophyllum *buniifolium;* glabrum, fronde sterili ovata multipartita, laciniis elongatis dichotomis, fertili laxe paniculata. *Gard. l. c.*

Anemia dichotoma. *Gard. Herb. Bras. n.* 4084.

Hab. Among the *débris* of schistose rocks on the summit of the Serra de Natividade, in the north of the province of Goyaz, Brazil.

This and the following elegant little Fern, I have separated from the genus *Anemia*, principally on account of their fertile fronds rising distinctly from the rhizoma; and being in no way connected with the stipes of the barren fronds. This latter circumstance characterizes the true *Anemias*, for in them the frond which bears the spikes of fructification is formed by the union of two fertile fronds with one barren one. Since my papers in the *Journal of Botany* were written, I have examined the anatomical structure of the fertile frond of *Anemia Phyllitidis*, Sw., and I find that three nearly distinct bundles of annular ducts can be traced to the top of the stipes, where they at last separate, one running into the barren, and one into each of the fertile portions. Link, I find, entertains similar views on the structure of *Anemia*.—*G. Gardner.*

Fig. 1. Sporangium. *f.* 2. Sporules:—*magnified.*

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TAB. CDLXXVIII.

Coptophyllum millefolium. *Gardn.*

Villosum, frondes terili oblonga vel ovato-oblonga multipartita, laciniis brevibus linearibus dichotomis, fertili elongata coarctata.

Coptophyllum millefolium. *Gard. in Hook. Lond. Journ. Bot. vol.* I, *p.* 133.

Anemia millefolium. *Gard. Herb. Bras. n.* 4083.

Hab. Rare on dry arid hills near Villa de Arrayas, in the north of the province of Goyaz, Brazil.

No one, at first sight, would believe the barren fronds of the two plants which constitute the genus *Coptophyllum*, to belong to the tribe of *Ferns*, resembling, as they do, much more the leaves of some species of *Umbelliferæ*. The developement of parenchyma is here nearly reduced to its minimum, and consequently the dichotomous venation of the leaf is most beautifully and distinctly exhibited.—*G. Gardner.*

Fig. 1. Sporangium. *f.* 2. Sporules :—*all magnified.*

TAB. CDLXXIX.

Ipomæa (Strophipomæa) Goyazensis. *Gardn.*

Glaberrima, foliis late ovatis subtriangularibusve acutis basi profunde cordato-bilobis lobis approximatis, pedunculis trifloris, calycis glabri laciniis oblongis obtusis, corollæ tubo infundibuliformi limbo patente quinquelobo lobis emarginatis.

Ipomæa Goyazensis. *Gard. Herb. Bras. n.* 3909.

Hab. Rare, among bushes at the foot of the Serra de Santa Brida, province of Goyaz, Brazil.

Tota glaberrima. *Caules* teretes, volubiles. *Folia* alterna, petiolata, 3-5 poll. longa, 2-3½ poll. lata, majora subtriangularia, minora rotundato-ovata, apice acuta, basi profunde cordato-biloba, lobis approximatis, supra viridibus, subtus pallidioribus. *Petiolus* unciam longus, supra canaliculatus. *Pedunculi* axillares, breves, triflori. *Pedicelli* inæquales, intermedio longitudine circiter calycis, lateralibus brevioribus. *Calycis* foliola subæqualia, oblonga, obtusa, concava. *Corollæ* tubus albus, infundibuliformis, limbo violaceo, patente, 5-lobo, lobis emarginatis. *Stamina* erecta, tubo inclusa.

This very beautiful species of *Ipomæa* I only met with once, and then but sparingly in flower. It would be a most desirable object for cultivation, the tube of the corolla being pure white, while the limb is of a rich violet colour.—*G. Gardner.*

TAB. CDLXXX.

Achimenes rupestris. *Gardn.*

Suffruticosa, caule erecto glanduloso-villoso, foliis ternatim verticillatis breve petiolatis ovatis serratis acutis vel subacuminatis basi rotundatis utrinque glanduloso-pilosis, pedicellis axillaribus solitariis 1-floris, calycis 5-partiti lobis oblongis obtusis erectis, corollæ limbo amplo patente, lobis rotundatis.

Achimenes rupestris. *Gardn. Herb. Bras. No.* 3874.

Hab. In clefts of rocks near the summit of the Serra de Natividade, province of Goyaz, Brazil. Feb. 1840.

Suffrutex pedalis, ubique glanduloso-pilosus. *Folia* ternatim verticillata, breve petiolata, 2 poll. longa, 12-16 lin. lata, ovata, serrata, acuta vel subacuminata, basi rotundata. *Calycis tubus* ovario adnatus; *limbus* 5-partitus, lobis oblongis, obtusis, erectis. *Corolla* pallide purpurea, tubo infundibuliformi, limbo amplo patente, 5-fido, lobis integris rotundatis. *Stamina* 4 didynama; antheris inter se cohærentibus.—*G. Gardner.*

TAB. CDLXXVI.

Lindenia rivalis. *Benth.*

Gen. Char. *Calycis tubus* turbinatus, 5-costatus; *limbus* 5-partitus, laciniis angustis acutis. *Corolla* hypocrateriformis, tubo longissimo tenui æquali; limbo 5-partito, laciniis oblongis patentibus, æstivatione imbricatis. *Antheræ* 5, lineares, sessiles ad corollæ sinus. *Stylus* filiformis e basi glaber, apice incrassatus, brevissime bifidus, lobis intus stigmatiferis. *Capsula* laciniis calycinis coronata, bilocularis, placentis centralibus. Semina numerosissima angulata.—Frutices *Mexicani.* Folia *opposita, breviter petiolata, oblonga, ad apices ramorum conferta.* Stipulæ *utrinque solitariæ, fusco-membranaceæ, acuminatæ, in vaginam brevem connatæ, deciduæ.* Corymbus *terminalis condensatus pauciflorus.* Bracteæ *lineares.* Flores *subsessiles, albi.*

Lindenia *rivalis;* corollæ limbi laciniis obtusiusculis tubo 4-5-ies brevioribus. *Benth. Pl. Hartw.* 84.

Hab. Southern Mexico; on the banks of the river Teapa, *Linden, Herb. du Sud, n.* 331 : Guatemala; on the banks of streams, La Vera Paz, *Hartweg, n.* 581.

This is a shrub of two or three feet high, resembling in many respects the Brazilian genus *Augustea,* but differing in the form of the corolla, of which the tube is long, slender and straight as in *Tocoyena,* without the inflated oblique throat of *Augustea,* the style is also perfectly smooth. In this the original species the leaves become at length nearly smooth and attain the length of three or four inches. The tube of the corolla is about five inches* long, and the divisions of the limb rather more than an inch. *Bentham.*

* In Plantæ Hartwegianæ, by a mistake in copying, it is said to be 5 to 5½ *lines,* instead of *inches.*

TAB. CDLXXVII.

Coptophyllum buniifolium. *Gard.*

Gen. Char. *Sporangia* ovata, vasculoso-reticulata, apice breviter radiatim striata, hinc longitudinaliter dehiscentia, biseriata, in laciniis frondis contractæ disposita. *Indusium* nullum. *Sporulæ* subtriangulares, striatæ, glabræ.—Filiculæ *Brasilianæ*, rhizoma *repente*. Frondes *cæspitosæ*, *dissimiles*; sterilis *multifida*, *pinnulis linearibus dichotomis*; fertiles *tripinnatæ*, *pinnulis sporangiferis*, *contractis*; venæ *furcatæ*.—*Gard. in Hook. Lond. Journ. Bot.* 1, *p.* 133.

Coptophyllum *buniifolium*; glabrum, fronde sterili ovata multipartita, laciniis elongatis dichotomis, fertili laxe paniculata. *Gard. l. c.*

Anemia dichotoma. *Gard. Herb. Bras. n.* 4084.

Hab. Among the *débris* of schistose rocks on the summit of the Serra de Natividade, in the north of the province of Goyaz, Brazil.

This and the following elegant little Fern, I have separated from the genus *Anemia*, principally on account of their fertile fronds rising distinctly from the rhizoma; and being in no way connected with the stipes of the barren fronds. This latter circumstance characterizes the true *Anemias*, for in them the frond which bears the spikes of fructification is formed by the union of two fertile fronds with one barren one. Since my papers in the *Journal of Botany* were written, I have examined the anatomical structure of the fertile frond of *Anemia Phyllitidis*, Sw., and I find that three nearly distinct bundles of annular ducts can be traced to the top of the stipes, where they at last separate, one running into the barren, and one into each of the fertile portions. Link, I find, entertains similar views on the structure of *Anemia*.—*G. Gardner.*

Fig. 1. Sporangium. *f.* 2. Sporules:—*magnified.*

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2

TAB. CDLXXVIII.

Coptophyllum millefolium. *Gardn.*

Villosum, frondes terili oblonga vel ovato-oblonga multipartita, laciniis brevibus linearibus dichotomis, fertili elongata coarctata.

Coptophyllum millefolium. *Gard. in Hook. Lond. Journ. Bot. vol.* I, *p.* 133.

Anemia millefolium. *Gard. Herb. Bras. n.* 4083.

Hab. Rare on dry arid hills near Villa de Arrayas, in the north of the province of Goyaz, Brazil.

No one, at first sight, would believe the barren fronds of the two plants which constitute the genus *Coptophyllum*, to belong to the tribe of *Ferns*, resembling, as they do, much more the leaves of some species of *Umbelliferæ*. The developement of parenchyma is here nearly reduced to its minimum, and consequently the dichotomous venation of the leaf is most beautifully and distinctly exhibited.—*G. Gardner.*

Fig. 1. Sporangium. *f.* 2. Sporules :—*all magnified.*

TAB. CDLXXIX.

Ipomæa (Strophipomæa) Goyazensis. *Gardn.*

Glaberrima, foliis late ovatis subtriangularibusve acutis basi profunde cordato-bilobis lobis approximatis, pedunculis trifloris, calycis glabri laciniis oblongis obtusis, corollæ tubo infundibuliformi limbo patente quinquelobo lobis emarginatis.

Ipomæa Goyazensis. *Gard. Herb. Bras. n.* 3909.

Hab. Rare, among bushes at the foot of the Serra de Santa Brida, province of Goyaz, Brazil.

Tota glaberrima. *Caules* teretes, volubiles. *Folia* alterna, petiolata, 3-5 poll. longa, 2-3½ poll. lata, majora subtriangularia, minora rotundato-ovata, apice acuta, basi profunde cordato-biloba, lobis approximatis, supra viridibus, subtus pallidioribus. *Petiolus* unciam longus, supra canaliculatus. *Pedunculi* axillares, breves, triflori. *Pedicelli* inæquales, intermedio longitudine circiter calycis, lateralibus brevioribus. *Calycis* foliola subæqualia, oblonga, obtusa, concava. *Corollæ* tubus albus, infundibuliformis, limbo violaceo, patente, 5-lobo, lobis emarginatis. *Stamina* erecta, tubo inclusa.

This very beautiful species of *Ipomæa* I only met with once, and then but sparingly in flower. It would be a most desirable object for cultivation, the tube of the corolla being pure white, while the limb is of a rich violet colour.—*G. Gardner.*

TAB. CDLXXX.

Achimenes rupestris. *Gardn.*

Suffruticosa, caule erecto glanduloso-villoso, foliis ternatim verticillatis breve petiolatis ovatis serratis acutis vel subacuminatis basi rotundatis utrinque glanduloso-pilosis, pedicellis axillaribus solitariis 1-floris, calycis 5-partiti lobis oblongis obtusis erectis, corollæ limbo amplo patente, lobis rotundatis.

Achimenes rupestris. *Gardn. Herb. Bras. No.* 3874.

Hab. In clefts of rocks near the summit of the Serra de Natividade, province of Goyaz, Brazil. Feb. 1840.

Suffrutex pedalis, ubique glanduloso-pilosus. *Folia* ternatim verticillata, breve petiolata, 2 poll. longa, 12-16 lin. lata, ovata, serrata, acuta vel subacuminata, basi rotundata. *Calycis tubus* ovario adnatus; *limbus* 5-partitus, lobis oblongis, obtusis, erectis. *Corolla* pallide purpurea, tubo infundibuliformi, limbo amplo patente, 5-fido, lobis integris rotundatis. *Stamina* 4 didynama; antheris inter se cohærentibus.—*G. Gardner.*

TAB. CDLXXXI.

Antidesma alnifolium.

Glabrum, foliis cordato-v. cuneato-rotundatis 3-5-nerviis grosse dentato-serratis, spicis axillaribus pilosis, masculis compositis, fœmineis simplicibus.

Hab. Eastern part of the Colony, Cape of Good Hope, *Mr. Bowie;* Port Natal, *Mr. Krauss, Herb. n.* 160.

It was my desire to give a name to a shrub that had been long cultivated at Kew, which induced me to figure and describe the present plant from very imperfect specimens, and of which only the *female* plant with immature ovaries, was known to me. This is a branching shrub, about 3 feet high, with the leaves variable, but not much unlike those of the Alder, the spikes of flowers axillary, scarcely longer than the petiole. The flowers clustered within small bracteas and sessile on the rachis. The perianth closely surrounding the germen, 5 to 6 cleft, the teeth obtuse. Germen ovate, styles 3; stigmas obtuse.—Long after the engraving was executed, I detected a *male* specimen of the same plant in Mr. Krauss' collection from Port Natal. Its spikes are long and compound, almost as long as the leaves. Flowers scattered, sessile. Perianth of 8 to 10 oblong segments, which are alternately smaller. Filaments 10 to 12, much exserted, with long hairs on the lower half. Anthers 2-celled, the lobes or cells rounded, spreading. Pistil none, but there are 3 or 4 fleshy glands at the base of the stamens. These male flowers are very small and not in perfect condition, being more or less eaten by insects; so that this account of the fructification is necessarily incomplete, too much so to allow of my saying with certainty that it is an *Antidesma*. The ovary is so imperfect and minute, that it is difficult to distinguish its internal structure. It was believed to be 3-celled by the artist; but the representation is probably erroneous.

Tab. CDLXXI. Female branch of *Antidesma alnifolium*. *Fig.* 1. Portion of a female spike. *f.* 2. Single flower. *f.* 3. The same with the perianth laid open. *f.* 4. Section of the ovary, but probably erroneously represented with 3 cells:—*magnified.*

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TAB. CDLXXXII.

Celastrus subspicatus.

Frutex glabra, ramis subverrucosis, foliis ovali-ellipticis acutis subcoriaceis serratis brevi-petiolatis, racemis compositis spicatis terminalibus rarissime axillaribus.

Hab. ——— ?

This is another plant, which like the *Antidesma alnifolium*, has been long cultivated in the Royal Botanical Gardens of Kew, and which flowers every summer, but of the history of which nothing is known; and it appears to be an undescribed species of *Celastrus*. The plant is 4 or 5 feet high, the branches flexuose and straggling, the leaves subcoriaceous, alternate, oval-elliptical, rather obscurely serrated, acute, paler and more conspicuously reticulated beneath; every where glabrous. The petioles are short, and in their axils are gemmæ with sharp, almost subulate, scales. The flowers are on short pedicels, and arranged in a compound mostly terminal spike or rather raceme, rarely axillary. Calyx cup-shaped, with 5 deep, rounded, obscurely denticulated lobes. Petals 5, obovate. Stamens 5, short, alternating with the petals, arising from a perigynous disc which lines the lower half of the calyx. Germen ovate, 3-celled, each with 2 ovules. Style short, thick. Stigmas 3, large, glandular.

Fig. 1. Flower from which the petals have been removed. *f.* 2. Entire flower. *f.* 3. Flower of which the calyx is laid open, and the petals removed. *f.* 4. Petal. *f.* 5. Vertical section of the pistil. *f.* 6. Transverse section of the germen:— *magnified.*

TAB. CDLXXXIII.

Oxyria elatior.

Caule aphyllo elato superne ramoso, racemis paniculatis, verticillis 6-12-floris, pedicellis fructiferis reflexis achenio subbrevioribus, sepalis interioribus obovato-subspathulatis obtusissimis, achenii suborbicularis alis membranaceis transverse venosis utrinque profunde cordato-incisis, foliis radicalibus longe petiolatis reniformibus margine obsolete crispato-undulatis. *Meisn.*

Oxyria elatior. *Brown in Wall. Cat. n.* 1726. *Meisn. in Wall. Plant. Asiat. Rar. v.* 3, *p.* 64.

Hab. The mountains of Emodi in Kamoun, (*Blinkworth.*) *Dr. Wallich.*

I am indebted for native specimens of this plant to Dr. Wallich; the living cultivated specimens, from which our figure is taken, were sent to me from the noble gardens of His Grace the Duke of Northumberland, at Syon House. Meisner well observes of it "*Oxyriæ reniformi*, Hook., nimis affinis, et vix differt, nisi statura altiore, sesquipedali, racemis longioribus magisque paniculatis, sepalis interioribus (i. e. erectis) apice dilatatis, obtusissimis, subtruncatis, paullo majoribus, fructus ala apice basique ad semen usque incisa (in *O. reniformi* autem subintegra v. basi tantum cordata.") It retains its characters in cultivation; yet I can hardly believe it distinct from our *O. reniformis* of Europe and of N. America. From the latter country, at Sitka, on the Pacific side, I possess specimens $2\frac{1}{2}$ feet high; and others nearly as tall from the Rocky Mountains.

Fig. 1. Cluster of flowers. *f.* 2. Single flower. *f.* 3. The same laid open. *f.* 4. Pistil. *f.* 5. Capsule:—*magnified.*

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TAB. CDLXXXIV.

Sauvagesia deflexifolia. *Gardn.*

Fruticosa, caule erecto versus apicem ramoso, foliis deflexis lineari-lanceolatis marginatis subserratis acuminatis, stipulis subulatis setoso-pectinatis, pedicellis solitariis erectis, sepalis ovato-oblongis aristato-acuminatis supra medium subserrato-ciliatis, petalis obtusis.

Sauvagesia deflexifolia. *Gardn. Herb. Bras. n.* 3008.

Hab. Rare in a moist sandy upland campo near the mission of Duro, province of Goyaz, Brazil, Oct. 1839.

Caulis fruticosus, erectus, ad apicem ramosus, pedalis. *Folia* demum deflexa, alterna, vix petiolata, 4 lin. circiter longa, lineari-lanceolata, subserrata, acuminata, pellucido-marginata. *Stipulæ* subulatæ, setoso-pectinatæ, persistentes. *Flores* solitarii, axillares, pedunculati, pedunculis 2 lin. longis simplicibus, erectis, nunquam deflexis. *Calyx* quinquepartitus; sepalis ovato-oblongis, aristato-acuminatis, supra medium subserrato-ciliatis, margine scariosis. *Petala* 5, hypogyna, æqualia, obovata, obtusa, alba. *Stamina* hypogyna. *Staminodia* exteriora 10 spathulato-oblonga, interiora 5 petaloidea, petalis opposita. *Filamenta* fertilia 5, brevissima, staminodiis petaloideis basi adhærentia: *antheris* oblongis bilocularibus, loculis lateraliter dehiscentibus. *Ovarium* liberum, uniloculare. *Stylus* simplex. *Stigma* obtusum. *Capsula* ovato-oblonga, trivalvis. *Semina* plurima ad suturas valvarum biseriata.—*G. Gardner.*

Tab. CDLXXXIV. A fruit-bearing specimen of *Sauvagesia deflexifolia*. *Fig.* 1. Fruit. *f.* 2. Leaf and stipules. *f.* 3. Capsule, with thc calyx removed :—*magnified.*

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TAB. CDLXXXV.

Chiliotrichum amelloides. *Cass.*

Gen. Char. *Capitulum* multiflorum, *fl. radii* ligulatis fœmineis uniseriatis, disci 5-dentatis hermaphr. *Invol. squamæ* imbricatæ oblongæ acutæ. *Recept.* convexum, paleis linearibus apice barbatis inter flores onustum. *Stigmata* fl. disci subulato-linearia elongata pubera. *Achænia* gracilia cylindracea angulato-striata. *Pappus* pluriserialis, setis filiformibus inæqualibus persistentibus.—Frutices *in extremâ Amer. Austr. spontanei parvi ramosi.* Folia *alterna sessilia coriacea integerrima, margine revoluta, supra glabra subtus plus minus tomentosa.* Pedunculi *solitarii* 1-*cephali tomentosi.* Ligulæ *albæ subtus purpurascentes.*

Chiliotrichum *amelloides;* foliis oblongo-ovatis basi angustatis planiusculis.

Chiliotrichum amelloides, *Cass. Dict.* 8, *p,* 576. De Cand. Prodr. 5, p. 216.

Amellus diffusus, *Forst. Comm. Goet.* 9, *p.* 39.

Tropidolepis diffusa, *Tausch, in Flora* 12, *p.* 68.

Aster Magellanicus, *Spreng. Syst.* 3, *p.* 526.

β. *lanceolatum,* (Tab. Nostr. CDLXXXV.), foliis lanceolatis acutis basi attenuatis. *DeCand.*

γ ? *rosmarinifolium,* Nees foliis linearibus intensius margine revolutis basi non angustatis.

Amellus rosmarinifolius. *Poepp. Exs.*

Ch. rosmarinifolium. *Less. in Linnæa,* 1831, *p.* 109. An species propria ? (*De Cand.*)

Hab. Straits of Magellan, *Forster;* Cape Horn, Staten Land, *Dr. Eights,* (in Herb. Nostr.)—β. Falkland Islands, *D'Urville* and *Gaudichaud. Mr. Wright,* (in Herb. Nostr.)

This is perhaps one of the tallest shrubs in the Falkland Islands. Gaudichaud speaks of it as from 3 to 5 feet high, and Mr. Wright as 8 to 10 feet. The flowers are numerous, the ray pure white.

Fig. 1. Receptacle. *f.* 2. Floret of the disk with its scale. *f.* 3. Hairs of the pappus. *f.* 4. Floret of the ray :—*magnified.*

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TAB. CDLXXXVI.

Aster Vahlii. *Hook. et Arn.*

Herbaceus glaberrimus parce ramosus, foliis lineari-lanceolatis integerrimis obtusiusculis basi semiamplexantibus infimis spathulatis basi subvaginantibus subserratis, capitulis solitariis, involucri pauciserialis foliolis glaberrimis imbricatis linearibus acutis, radio purpureo, pappo cinereo, achenio villoso.

Aster Vahlii. *Hook. and Arn. Contr. to Fl. of S. Am. in Hook. Comp. Bot. Mag. p.* 49.

Erigeron Vahlii. *Gaudich. Fl. Isles Malouines, in Ann. des Sc. Nat. v.* 5, *p.* 103. *De Cand. Prodr.* 5, *p.* 295.

Hab. Falkland Islands. *C. Darwin, Esq., Mr. Wright*; Cape Negro, Straits of Magellan, *C. Darwin, Esq.*; Andes of Chili, *Dr. Gillies*; Valdivia, *Mr. Bridges*, (*n.* 623); Chiloe, *Cuming*, (*n.* 55.)

Nearly allied to *Aster alpinus*, but at once distinguished by the glabrous leaves and stem, and involucre. Achenia sulcated, hairy.

Fig. 1. Floret of the disk. *f.* 2. Ditto of the ray. *f.* 3. Hairs of the pappus :—*magnified.*

TAB. CDLXXXVII.

Cheilanthes monticola. *Gardn.*

Frondibus pinnatis, pinnis oblongis obtusis crenatis glabris, basi superiore auriculatis.

Cheilanthes monticola. *Gardn. Herb. Bras. n.* 3557.

Hab. On the perpendicular face of Schistose rocks, in a deep narrow ravine near the summit of the Serra de Natividade, province of Goyaz, Brazil. January, 1840.

Radix fibrosa, fibrillis pilosis. *Rhizoma* parvum, subglobosum. *Frondes* plures, fasciculatæ, pinnatæ. *Stipes* vix pollicaris, atro-fuscus, hispidus, semiteres, supra canaliculatus. *Frons* 3-4 pollicaris. *Rachis* filiformis, glaber. *Pinnæ* alternæ, sessiles, 5 lin. longæ, oblongæ, obtusæ, crenatæ, glabræ, basi sursum auriculatæ, deorsum subtruncatæ. *Venæ* internæ, pinnatæ, furcatæ, venulisque divergentes, apice soriferæ. *Sori* marginales, oblongi. *Indusia* oblonga, membranacea, albida. *Sporangia* pedicellata, obovata, annulo fere completo cincta. *Sporulæ* subrotundæ, sub lente scabrellæ.

The only other species of *Cheilanthes* with simply pinnated fronds is *C. micropteris*, Sw., from the Andes of Peru. It differs from the present plant by its more slender habit and nearly rounded hairy pinnæ.—*G. Gardner.*

Fig. 1. Pinna. *f.* 2, 3. Sporangia. *f.* 4. Sporules:—*magnified.*

2
3
4

TAB. CDLXXXVIII.

Scolopendrium Lindeni.

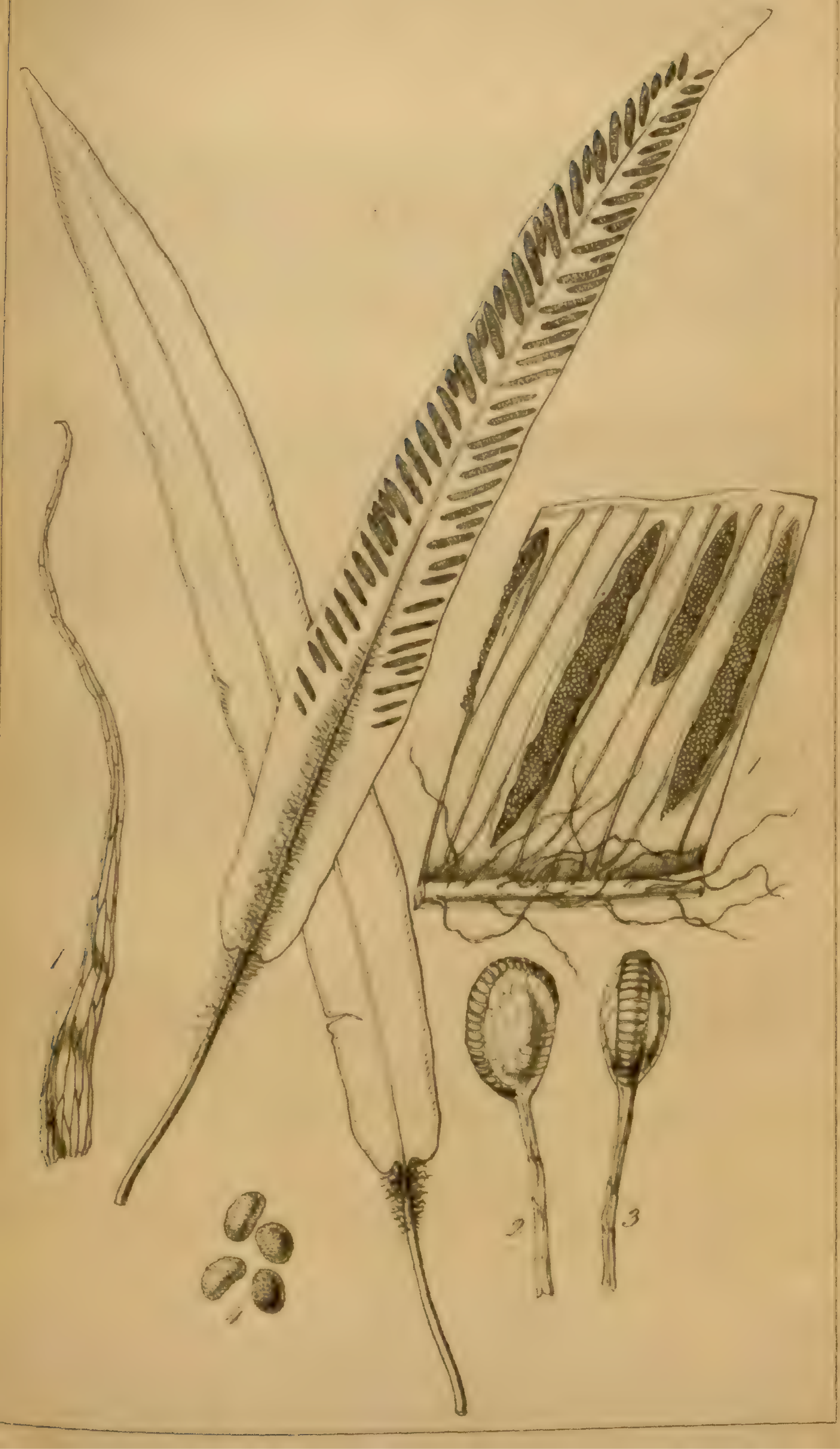
Fronde lineari-oblonga obtuse attenuata integerrima basi cordata sublonge stipitata, stipite superne costâque inferne subtus ferrugineo-lanatis, venis ad basin bifurcatis venulis seu ramis liberis.

Hab. On old oaks, Chamulars, Prov. Chiapas, Mexico. *Linden, Herb. Mex. n.* 1543.

Caudex ——*?* *Stipes* subbiuncialis, superne squamis angustis subulatis ferrugineis lanosus. *Frons* vix spithamæa, ¾ unc. lata, lineari-oblonga, coriaceo-membranacea, integerrima, marginata, apice obtuse attenuata, basi cordata, superne glaberrima, subtus, præcipue ad costam basin versus, ferrugineo-lanosa. *Venæ* usque ad basin furcatæ; *venulæ* approximatæ, parallelæ, oblique horizontales, simplices, apicibus paulo infra marginem liberis clavatis; venula superiore et venula inferiore mox superioris venæ soriferis. *Sori* lineares longitudine variabiles.

This would be a true *Scolopendrium* of Presl, having the veinlets free at the apices, not there connected by reticulated veinlets as in his *Antigramma*. As a species it is quite different from any described one; but its nearest affinity is perhaps with *S. longifolium* of Presl (Reliq. Hænk. p. 48, t. 9, f. 1.), a native of Luzon. That, however, has much longer fronds, is quite glabrous, and tapers at the base into the stipes.

Fig. 1. Portion of the fructified frond. *f.* 2, 3. Sporangia. *f.* 4. Sporules. *f.* 5. Scale from the costa:—*magnified.*


2
3

TABS. CDLXXXIX (AND CDXC.)

GUNNERA (Misandra) FALKLANDICA.

Dioica omnino apetala repens ferrugineo-hirsuta, pilis nunc deciduis, foliis reniformi-cordatis sublobatis crenatis petiolum subæquantibus, scapis folio brevioribus, floribus masc. et fœm. in spicam ovatam dense glomeratis, perianthiis glaberrimis.
Misandra Magellanica. *Gaud. in Ann. des Sc. Nat.* 5, *p.* 89. (*vix* Gunnera Magellanica, *Lam. Dict. v.* 3, *p.* 61, *t.* 801, *f.* 2.)
HAB. Falkland Islands. *Gaudichaud, Mr. Wright.*

Whether or not I am correct in considering this distinct from *G. Magellanica* of the Straits of Magellan, must be left for more copious specimens and further observations to determine. I possess in my herbarium, from Valdivia, gathered by Mr. Bridges, (n. 647 of his herbarium,) what I consider to be the plant of Lamarck. It has leaves almost wholly glabrous; and petioles, even while the inflorescence is young, from 8 inches to a foot long, with the blade of the leaf shorter, broader, and exactly reniform, and the perianths (at least of the female, for I have not seen the male flower) very downy. Our present plant may also inhabit the Straits of Magellan as well as the Falkland Islands; for Mr. Bennett, in his valuable remarks on *Gunnera*,* observes, "Of *Misandra*, *two* species (both collected by Sir Joseph Banks and Dr. Solander) inhabit the dreary mountains of Tierra del Fuego; only one of these has yet been published." There exists, as is well known, so great a similarity between the vegetation of the Falkland Islands and that of Tierra del Fuego, that it is probable ours may be the 2nd species alluded to by Mr. Bennett. In the youngest of my flowering specimens I have been able to detect no petals to the male flowers; nevertheless I do not hesitate in thinking with Mr. Bennett and Endlicher that *Misandra* cannot generically be distinguished from *Gunnera*. The fruit is bright red and fleshy, each containing a small compressed stone. But the exact structure of the seed and embryo I have not been able to observe.

TAB. CDLXXXIX. *Fig.* 1. Male Plant; *nat. size.* *f.* 2. Small branch of male flowers; *magnified.* *f.* 3. Female plant; *nat. size.* *f.* 4. Female flower; *magnified.*

* Plantæ Javanicæ rariores, p. 74.

TAB. CDXC.

Gunnera (Misandra) Falklandica.

(Female Plant, noticed in the previous description.)

Tab. CDXC. Female Plant, with nearly mature fruit. *Fig.* 1. Single fruit, with the dark purple styles still remaining. *f.* 2. A drupe, cut through vertically. *f.* 3. Stone of the drupe: —*magnified.*

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TAB. CDXCI.

Homoianthus echinulatus. *Cass.*

Frutescens ramosus, caule ascendente tereti glabro dense foliato, foliis sessilibus basi dilatata semiamplexicaulibus lanceolatis subtus nervis secundariis transversim rugoso-annulatis, pedunculo terminali solitario foliato monocephalo, involucri squamis subtriseriatibus oblongo-linearibus, ext. spinuloso-ciliatis, int. margine membranaceis.

Homoianthus echinulatus. *Cass. Dict. Sc. p. 458. De Cand. Prodr. 7, p. 61.*

Perlebium recurvatum. *Vahl. Act. Soc. H. N. Hafn. 1, p. 13, t. 7. Gaudich. in Ann. des Sc. Nat. v. 5, p. 103. (not Don, nor Pers.)*

Chætanthera recurvata. *Sprengl. Syst. 3, p. 513.*

Perezia recurvata. *Less. in Linnæa, 1830, p. 21. Less. Syn. p. 112. Hook. et Arn. in Comp. to Bot. Mag. v. 2, p. 42.*

Hab. Falkland Islands, *Gaudichaud, Mr. Wright;* Straits of Magellan, *Commerson, Mr. Darwin, Capt. King.*

One of the most beautiful plants of the Falkland Islands, growing in peaty soil among rocks in large tufts, copiously branched, the branches bearing large, bright blue, very fragrant, flowers. The leaves, at least in a dry state, are singularly transversely wrinkled, and have their margins bent back so as almost to meet at the midrib.

Fig. 1. Leaf. *f.* 2. Involucre cut through, showing the receptacle. *f.* 3. Floret. *f.* 4. Hair from the pappus. *f.* 5. Tubular portion of the same, laid open to show the stamens and style. *f.* 6. Apex of style and stigmas:—*magnified.*

TAB. CDXCII.

Bolax Glebaria. *Comm.*

Bolax Glebaria. *Comm.*—*Gaudich. in Ann. des Sc. Nat.* 5, *p.* 104, *t.* 3. *f.* 2. *De Cand. Prodr.* 4, *p.* 78.
Hydrocotyle gummifera. *Lam. Dict.* 3, *p.* 156, *t.* 189, *f.* 2? *(fig. mala.)*
Bolax gummifer et complicatus. *Spreng. Syst. Veget. vol.* 1, *p.* 879.
Azorella cæspitosa. *Vahl, Symb.* 348.
Hab. Straits of Magellan. *Commerson;* Falkland Islands, *Gaudichaud, Mr. Wright*; Chili and Patagonia, (*De Candolle.*)

Among some interesting drawings of Falkland Island scenery, brought home by Mr. Wright, a remarkable feature in the country is due to the frequent occurrence of the singular rounded and very compact tufts of this little Umbelliferous plant. "What can be more surprizing, in speaking of the vegetation of these islands," says D'Urville, "than the enormous tufts of *Bolax?* At first, their form resembles small mole-hills covered with green turf; but annually their young shoots, continually renewed, augment their original dimensions, till at length the mass attains a diameter and a height of many feet!" "It is an umbelliferous plant," he continues, "almost microscopic, respecting the nature of which the most experienced eye is apt to be deceived, so much is its appearance at variance with the usual aspect of the family to which it belongs. A resinous substance, of most powerful odour, exudes from every part of the plant and announces its presence from a distance." Mr. Wright speaks of the tufts being so large as to resemble small hay-stacks. The root is very long and tapering, perennial; branches numerous, dichotomous, proliferous. I find two varieties; the one which alone I have seen with fructification, has excessively dense and small foliage (f. 4-8) and is quite glabrous on the outside of the leaves, stellato-pubescent within; the other (f. 1-3) has larger leaves, stellato-pubescent on both sides; all are trifid, concave, with large concave sheathing glossy bases. Umbels sessile, 3-4-flowered. Leaves of the involucre ovate, entire, with sheathing bases (f. 6.)

Fig. 1. Larger *var.* of *Bolax Glebaria, nat. size.* *f.* 2, 3. Leaves, *magnified.* *f.* 4. Tuft of the smaller *var.* with scarcely mature fruit, *nat. size.* *f.* 5. Leaf. *f.* 6. Umbel. *f.* 7. Fruit. *f.* 8. Transverse section of ditto, *magnified.*

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TAB. CDXCIII.

Senecio littoralis. *Gaudich.*

Caule erecto superne præcipue ramoso tereti, foliis sessilibus lineari-lanceolatis pungenti-acutis marginibus revolutis basi dilatatis semiamplexicaulibus, ramis foliosis monocephalis, capitulis radiatis, involucri calyculati squamis circiter 20 lineari-lanceolatis disco æqualibus, floribus disci 30-40, ligulis 12-14, receptaculo convexo nudo.

Senecio littoralis. *Gaudich. in Ann. des Sc. Nat.* 5, *p.* 104. *De Cand. Prodr.* 6, *p.* 413.

α. *lanatus*; foliis ramisque albo-tomentosis. *Gaudich. l. c.*

β. *glabratus*; foliis glabris. *Gaudich. l. c.* (Tab. Nost. CDXCIII.)

Hab. Falkland Islands. *Gaudichaud, Mr. Wright.*

The specimen here represented has leaves glabrous or nearly so; but about the branches and particularly about the leaves is an arachnoid wool, which looks as if, in the early state, it had covered the whole of the stem, branches and involucre; the α. of Gaudichaud is woolly all over. Perhaps *S. vaginatus*, Hook. and Arn. Fl. of S. Am. in Journ. of Bot. v. 3, p. 331, should be referred to this species.

Fig. 1, 2. Upper and under side of a leaf. *f.* 3. Involucre cut through to show the receptacle. *f.* 4. Floret of the disk. *f.* 5. Hair from the pappus. *f.* 6. Floret of the ray:—*magnified.*

Alex. & Ferguson lith. Glasgow

TAB. CDXCIV.

Oxalis enneaphylla. *Cav.*

Acaulis, radice bulbifera squamosa, petiolis longissimis, foliolis 9-20 cuneato-oblongis profunde bilobis subpilosis obtusis, scapis unifloris petiolo longioribus sub florem bibracteatis, sepalis oblongis villosis apice bipunctatis, staminibus longioribus stylos hirsutos superantibus.

Oxalis enneaphylla. *Cav. Ic. v.* 5, *p.* 7, *t.* 411. *De Candolle Prodr.* 1, *p.* 702. *Gaudich. in Ann. des. Sc. Nat.* 5, *p.* 105.

β. pumila; minor magisque pilosa.

Oxalis pumila. *Gaudich. in Freyc. Voy.* 1, *p.* 137.

Hab. Falkland Islands. *Née, Gaudichaud, Mr. Wright.*

This must be a very handsome plant, with its copious foliage and large showy white flowers. Its acid property is well known in its native country. Pernetty calls the plant "*Vinaigrette,*" and Mr. Wright speaks of it as eaten in pies, and used instead of apple sauce.

Fig. 1. Calyx with stamens and pistil. *f.* 2. Stamens and pistil. *f.* 3. Pistil:—*magnified.*

3

TAB. CDXCV.

Rubus geoides. *Sm.*

Caulibus repentibus petiolisque filiformibus, foliis trisectis lobo terminali maximo ovato obtuso irregulariter serrato lateralibus minimis sæpe nullis aut cum terminali coalitis, pedunculis solitariis unifloris petiolo multo brevioribus.

Rubus geoides. *Sm. Ic. Ined. t.* 19.

Dalibarda geoides. *Pers.—De Cand. Prodr.* 2, *p.* 568.

Hab. Straits of Magellan. *Commerson;* Falkland Islands, *Gaudichaud, Mr. Wright.*

Sir James Smith was only acquainted with the flowering state of this plant. My specimens from Mr. Wright are in fruit, but they confirm the views of Sir James Smith respecting its genus; for it is entirely the fruit of a *Raspberry*, being very juicy, transparent, and delicious to the taste. The flavor Mr. Wright describes as between a Raspberry and Strawberry. Our flowering specimen is copied from Sir James Smith's figure, in order that our representation may be the more complete.

Allan & Ferguson lith. Glasgow

TAB. CDXCVI.

Chabræa suaveolens. *DC.*

Tota præsertim ad apicem lanuginosa, caule simplici folioso monocephalo, foliis radicalibus oblongis obtusis pinnatifidis sensim in petiolum longum attenuatis lobis approximatis rotundatis caulinis semiamplexicaulibus lanceolatis acuminatis superioribus integerrimis, involucri squamis lineari-oblongis lana immersis, stam. filamentis superne glanduliformibus.

Chabræa suaveolens. *De Cand. Prodr.* 7, *p.* 59.

Perdicium suaveolens. *Gaudich. in Freyc. Voy. p.* 125.

Lasiorhiza ceterachifolia. *Cass. Dict.* 43, *p.* 80. *Less. in Linnæa,* 1830, *p.* 11.

Lasiorhiza viscosa. *Cass. Dict.* 43, *p.* 80?

Hab. Falkland Islands. *Née, Gaudichaud, Mr. Wright.*

A very handsome showy species with large and highly fragrant flowers, which some authors, as Pernetty, compare to the odour of Benzoin, and others (Gaudichaud) to that of Vanilla.

Fig. 1. Involucre cut through to show the receptacle. *f.* 2, 3. Florets. *f.* 4. Stamens. *f.* 5. Hair of the pappus :—*magnified.*

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TAB. CDXCVII.

Ranunculus biternatus. *Sm.*

Caule repente, foliis longe petiolatis circumscriptione cordatis 3-partitis partitionibus petiolulatis iterum sæpe tripartitis lobis cuneatis 3-fidis, petalis 6-8 oblongis (flavis), carpellis plurimis ovatis compressis stylo recurvato mucronatis in globum digestis.

Ranunculus biternatus. *Sm. in Rees, Cycl. n.* 48. *De Cand. Prodr. v.* 1, *p.* 30. *Deless. Ic. Sel. t.* 24.

Hab. Straits of Magellan. *Commerson*; Falkland Islands, *Mr. Wright*.

This species does not appear to have been discovered in the Falkland Islands till Mr. Wright detected it there. I should not have figured it, had I ascertained, before the engraving was prepared, that it was the same with the *R. biternatus* already so well represented by Delessert in his valuable *Icones*. I was misled by De Candolle's placing this plant in his division of the genus "*floribus albis*," whereas the inflorescence is decidedly yellow, as indeed Sir James Smith had suspected, whose description is moreover very accurate.

Fig. 1. Flower. *f.* 2. Head of carpels. *f.* 3. Single carpel :— *magnified.*

3
2

TAB. CDXCVIII.

Arabis Macloviana.

Glaberrima inferne ramosa, ramis erectis teretibus, foliis subglaucis inferne dentato-serratis radicalibus ovato-oblongis longe petiolatis caulinis sensim minoribus brevi-petiolatis supremis lineari-oblongis sessilibus, corymbis compactis, calycibus patenti-hirsutis pedicellos superantibus, petalis spathulatis albis, siliquis erectis strictis uncialibus sublato-linearibus stylo breviter terminatis, valvarum nervibus 3 crassis et reticulatim venosis.

Brassica Macloviana. *Gaudich. in Freyc. Voy.* 1, *p.* 137.

Hab. Falkland Islands. *Gaudichaud, Mr. Wright.*

M. Gaudichaud's description of *Brassica Macloviana* so entirely accords with this plant, that I have no hesitation in pronouncing the two to be the same; but I do not see that the species can be referred to *Brassica*. It possesses quite the habit and I think the character of *Arabis*. The valves of the siliqua have three peculiarly strong prominent nerves, and the lateral ones, being perhaps the most prominent, give a somewhat 4-angled or 4-sided character to the fruit.

Fig. 1, 2. Flowers. *f.* 3. Stamens and Pistil. *f.* 4. Petal. *f.* 5. Fruit. *f.* 6. Portion of a valve of the siliqua. *f.* 7. Seed. *f.* 8. The same laid open. *f.* 9, 10. Embryos:—*magnified.*

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TAB. CDXCIX.

Viola maculata. *Cav.*

Stigmate apice subplano, rostro brevissimo, caule abbreviato, foliis ovatis subtus sæpe minute fusco-punctatis longe petiolatis serratis puberulis, stipulis ovatis fimbriato-ciliatis, calcare brevi obtuso, petalis barbatis.

Viola maculata. *Cav. Ic. v.* 6, *t.* 539. *De Cand. Prodr.* 1, *p.* 297. *Hook. and Arn. in Bot. Misc. v.* 3, *p.* 144, *and in Bot. of Beech. Voy. p.* 10.

V. pyrolæfolia. *Poir. Dict.* 8, *p.* 836. *Gaudich. in Ann. des Sc. Nat.* 5, *p.* 104. (*excl. Syn.* V. Magellanicæ, *Forst.*)

V. lutea, foliis non acutis. *Feuill. Chil.* 3, *p.* 66, *t.* 48.

Hab. Falkland Islands. *Née, Gaudichaud, Mr. Wright*; Straits of Magellan to Conception in Chili. *Messrs. Lay and Collie, Cuming, &c.*

This inhabits the sands and sea-shores of the Falkland Islands, and, probably, similar localities in the Straits of Magellan and in Chili. The name is very inappropriate; the minute dots on the underside of the leaves which gave origin to it being almost microscopic, and not always present. The flowers are yellow, and no doubt can exist of the plant being the "*Viola lutea, foliis non acutis,*" (for the leaves are frequently obtuse,) of *Feuill. Chil.*

Fig. 1. Stamens and pistil. *f.* 2. Single anther. *f.* 3. Pistil. *f.* 4. Petal :—*magnified.*

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TAB. D.

Arachis marginata. *Gardn.*

Perennis, caule brevi subsimplici sericeo-villoso, stipulis foliolorum par infimum superantibus, foliolis coriaceis obovatis oblongisve emarginatis supra glaberrimis subtus sericeo-villosis margine valde incrassatis longe ciliatis.

Arachis marginata, *Gardn. Herb. Bras. n.* 3103.

Hab. Rare in upland sandy Campos near the mission of Duro, province of Goyaz, Brazil.

The specimen from which the figure has been taken is perhaps only the young state of a much larger plant, as all the other species of the genus have long, procumbent, lateral branches. It differs from *A. villosa*, Benth., by the leaves being smooth above; from *A. tuberosa*, Bong., by the long silky hairs which cover the whole plant, except the upper surfaces of the leaflets, and the much less reticulated foliage; and from both by this latter being more coriaceous and having a much thicker margin. My *n.* 2091, from Piauhy, is a broad-leaved form of *Arachis pusilla*, Benth. in Trans. Linn. Society, 18, p. 159.—*G. Gardner.*

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TAB. DI.

Seris polymorpha. *Less.*

Scapo subsimplici subaphyllo, foliis radicalibus oblongo-lanceolatis obtusis apiculatis utrinque lanuginosis reticulato-venosis integerrimis basi attenuatis, invol. squamis linearibus acuminatis dense lanuginosis, capitulo radiato.

Seris polymorpha. *Less. in Linnæa*, 5. *p.* 253. *Syn. p.* 99. *DC. Prodr.* 7. *p.* 19. *Gardn. Herb. Bras. n.* 4956.

Onoseris brevifolia. *Don, Trans. Linn. Soc.* 16. *p.* 246. *ex Less.*

Hab. In upland sandy Campos, on the Serro do Frio, Diamond district, Brazil. Aug. 1840.

Herba pedalis. *Radix* usque ad collum lignosa. *Caulis* erectus, simplex vel ramosus, supra medium folia alterna bracteiformia gerens. *Folia* radicalia oblongo-lanceolata, obtusa, apiculata, utrinque lanuginosa, reticulato-venosa, integerrima, basi attenuata. *Capitula* multiflora. *Invol.* squamæ pluriseriales lineari-acuminatæ, extus lanuginosæ; interiores longiores. *Receptaculum* nudum. *Flor.* disci hermaphroditi, radii fœminei. *Flor. hermaph.* regulares quinquefidi, lobis revolutis: *fœm.* bilabiati vel aliquando ligulati. *Antheræ disci* caudibus laceratis; *radii* abortivæ, distinctæ: *Filamenta* glabra. *Stylus* glaber, ramis erectis obtusis. *Achenium* oblongum, erostre, dense villosum. *Pappus* uniserialis, setaceus, scaber.

This is a truly polymorphous plant, varying very much in the shape and size of its leaves, in the stem being simple or branched, and in the florets of the ray being either ligulate or bilobiate.—*G. Gardner.*

Fig. 1. Floret of the disk. *f.* 2. Anthers from the same. *f.* 3. Floret of the ray. *f.* 4. Hairs of the pappus:—*magnified.*

TAB. DII.

Lavoisiera lycopodioides. *Gardn.*

Fruticosa dichotoma glaberrima, ramis teretibus adscendentibus subradicantibus, foliis sessilibus quadrifariam imbricatis ovatis obtusis supra medium subserratis uninerviis venis lateralibus subobsoletis, floribus terminalibus solitariis sessilibus, calycis fusco-punctati tubo turbinato lobis 5 ovatis æqualibus, antheris 10 dissimilibus.

Lavoisiera lycopodioides. *Gardn. Herb. Bras. n.* 4577.

Hab. In bare elevated rocky places, Serro do Frio, Province of Minas Geraes, Brazil. Aug. 1840.

Frutex parvulus. *Rami* dichotomi, teretes, adscendentes, subradicantes. *Folia* sessilia, quadrifariam imbricata, ovata, obtusa, supra medium subserrata, uninervia, venis lateralibus subobsoletis. *Flores* terminales, solitarii, sessiles. *Calycis tubus* turbinatus, limbo 5-lobo, lobis ovatis obtusis, demum deciduis. *Petala* 5, obovata, ampla, rosea. *Stamina* 10, inæqualia. *Antheræ* oblongæ, brevi-rostratæ, uniporosæ. *Stylus* filiformis. *Stigma* obtusum. *Ovarium* supra medium liberum, glabrum. *Capsula* 5-locularis, apice dehiscens. *Semina* angulata. *Testa* eleganter pellucido-punctata.

This most beautiful little shrub trails along the ground among a small species of *Vellozia*, and those portions of it which are not in flower resemble very much some of the larger kinds of *Lycopodium*. It does not agree with the characters of any of the species enumerated in De Candolle's Prodromus; but, judging from the description, it comes nearest to his *L. Itambana*.—*G. Gardner.*

Fig. 1. Apex of a branch with a flower-bud. *f.* 2. Two of the stamens. *f.* 3. Pistil. *f* 4. 5. Leaves :—*magnified.*

2
3

TAB. DIII.

Adiantum filiforme. *Gardn.*

Frondibus pinnatis, pinnis distantibus glabris subdimidiatis basi cuneatis fertilibus apice incisis, laciniis integris, sterilibus spinuloso-dentatis, indusiis lævibus, rachi glabra apice elongata nuda demum radicante.

Adiantum filiforme. *Gardn. Herb. Bras. n.* 2391.

Hab. In shady clefts of sandstone rocks near the city of Oeiras, Province of Piauhy, Brazil. April 1839.

Frondes fasciculatæ. *Stipes* subpollicaris, atropurpureus, teres, nitidus, subpaleaceus. *Rachis* teres, filiformis, glabra, nitida, apice elongata, nuda, extremitate demum radicante. *Frons* 6-8-pollicaris, pinnata. *Pinnæ* distantes, 4-5 lin. longæ, alternæ, petiolatæ, obovatæ, subdimidiatæ, basi cuneatæ, apice vel incisæ laciniis integris soriferis, vel spinuloso-dentatæ laciniis sterilibus. *Venæ* flabellatæ, pluries furcatæ, venulis parallelis. *Sori* marginales, subrotundi. *Indusia* subrotunda, membranacea, glabra.—*G. Gardner.*

Fig. 1. Fertile pinna:—*magnified.*

TAB. DIV.

Adiantum sinuosum. *Gardn.*

Fronde tripartita, ramis pinnatis vel rariter lateralibus bipinnatis, pinnis magnis oblongis obtusis vel suborbicularibus dimidiatis petiolatis margine superiore inciso-lobatis, laciniis late sinuoso-emarginatis, soris reniformibus, indusiis glabris, stipite rachibusque nitidis glabris.

Adiantum sinuosum. *Gardn. Herb. Bras. n.* 3552.

Hab. In dry rocky places near the summit of the Serra de Natividade, Province of Goyaz, Brazil. January, 1840.

Frondes fasciculatæ. *Stipes* 6-8 pollicaris, semiteres, aterrimus, nitidissimus, glaber, basi pilis paleaceis rufis obtectis. *Rachis* teres, glabra, nitida. *Frons* 1-1½- pedalis, tripartita, ramis pinnatis, vel rariter lateralibus bipinnatis, ramo intermedio majore. *Pinnæ* magnæ, sesquipollicem et ultra longæ, pollicem circiter latæ, petiolatæ, oblongæ, vel juniores suborbiculares, dimidiatæ, margine superiore inciso-lobatæ, laciniis late sinuoso-emarginatæ. *Venæ* eleganter flabellatæ, pluries furcatæ, venulis parallelis. *Sori* marginali, reniformes. *Indusia* reniformia, membranaceo-fusca, glabra.—*G. Gardner.*

Fig. 1. Fertile lacinia of a pinna :—*magnified.*

TABS. DV—DVI.

Utricularia nelumbifolia. *Gardn.*

Caule horizontali radicante, foliis magnis longe petiolatis subconcavis reticulato-venosis, scapo multifloro, corolla amplissima, labio inferiore obscure trilobo, calcare descendente conico incurvo acuto labio inferiore subæquali.

Utricularia nelumbifolia. *Gardn. Herb. Bras. n.* 5839.

Hab. In the water which collects within the leaves of a large species of *Tillandsia*, growing abundantly on an arid rocky part of the Organ Mountains, at an elevation of about 5000 feet above the level of the sea. March 1841.

Caulis demersus, horizontalis, crassitie circiter pennæ corvinæ, radicans, sarmentosus. *Radices* fibrillosæ, vesiculiferæ; vesiculis pedicellatis, majusculis, subrotundis, margine inferiore pilis 2 gerentibus. *Folia* solitaria, erecta, longe petiolata, rotundata, peltata, subconcava, eleganter venoso-reticulata, diametro 3-3½ pollicaria. *Petioli* 10-14-pollicares longi, basi sarmentacei. *Scapus* 2-2½-pedalis, bisquamosus, squamis 2 valde distantibus, circiter 2-3 lin. longis, angustis, lanceolatis, acutis. *Racemus* terminalis, simplex, 4-8 poll. longus, floribus 6-9 subsecundis remotis, bracteatis. *Bractea* caulina ad basin cujusvis pedicelli, profunde 3-partita; divisuris inæqualibus, nervosis, intermedia circiter 3-lin. longa. *Pedicelli* 10-12-lin. longi, nudi. *Calyx* 2-phyllus, æqualis, circiter 7-lin. longus; foliolis ovatis, obtusis, integerrimis, patentissimis, demum erectis. *Corolla* amplissima, circiter sesquipollicaris, violacea; *labium superius* obtusum, integrum; *inferius* obscure trilobum: *calcar* labium inferius subæquans, descendens, conicum, acutum, apice sursum curvatum. *Stylus* brevis, apice infundibuliformis. *Ovarium* ovatum.

This is by far the finest, largest, and most remarkable species of *Utricularia* which has yet been detected in Brazil; besides by the ordinary method of seed, it propagates itself by runners, which it throws out from the base of the scape. This runner is always found directing itself towards the nearest *Tillandsia*, where it inserts its point into the water which accumulates between the bottoms of the leaves, and gives origin to a new plant, which, in its turn, sends out another shoot. In this manner I have seen not less than six plants united to each other.—*G. Gardner.*

TAB. DVII.

Cassebeera gleichenioides. *Gardn.*

Frondibus bipinnatis, pinnis linearibus elongatis profunde pinnatifidis, laciniis brevibus oblongis coriaceis reflexis margine integris, stipite rachibusque glabris.

Cassebeera gleichenioides. *Gardn. Herb. Bras. n.* 5295.

Hab. In bushy rocky places near Ciudade Diamantina, the capital of the Diamond district, Brazil. August 1840.

Rhizoma repens, paleis fuscis obtectum. *Frondes* fasciculatæ. *Stipes* 6-8-pollicaris, semiteres, canaliculatus, atro-fuscus, glaber, basi paleis paucis instructus. *Frons* pedalis et ultra, bipinnata. *Pinnæ* lineares, elongatæ, profundè pinnatifidæ, laciniis brevibus obtusis, oblongis, coriaceis, reflexis, marginibus integris. *Venæ* internæ, pinnatæ, furcatæ. *Sorus* solitarius, oblongus, marginalis. *Indusium* oblongum, membranaceum.—*G. Gardner.*

Fig. 1. Fertile pinna. *f.* 2. Capsules :—*magnified.*

TAB. DVIII.

Physosiphon loddigesii.

Folio lineari-oblongo obtuso basi attenuato spica spirali laxa duplo breviore, calycis laciniis ovatis acutis patentibus tubo trigono triplo brevioribus, petalis oblongo-cuneatis, labello trilobo disco tuberculato lobis rotundatis intermedio crenulato. Physosiphon Loddigesii. *Lindl. in Bot. Reg. sub tab.* 1797. Stelis tubata. *Lodd. Bot. Cab. t.* 1601.

Our drawing was made from the living plant in the stove of the Royal Botanical Gardens of Kew. It is indeed already figured in Loddiges' Botanical Cabinet; but no dissections are given. The following is the character of the genus, as given by Dr. Lindley. *Calyx* tubulosus basi ventricosus, apice trifidus. *Petala* in fundo calycis, carnosa, nana. *Labellum* et *Columna* Stelidis. *Pollinia* 2, sphærica.—Herbæ *epiphytæ habitu* Pleurothallidis;—and the species given are, besides the above, *P. emarginata* (Pleurothallis emarginata, *Lindl. Gen. et. sp. Orchid, p.* 6.) and *P. spiralis*, Lindl. in Bot. Reg. l. c.

Physosiphon Loddigesii was discovered at Xalapa, Mexico, by M. Deppe, a German botanist and traveller, well-known by his researches in Mexico.

Fig. 1. Flower. *f.* 2. The same, the tubular calyx being removed. *f.* 3. Pollen-masses :—*magnified.*

TAB. DIX.

Grammitis (cheilopteris) Organensis. *Gardn.*

Frondibus linearibus elongatis obtusis profunde crenato-serratis basi attenuatis glabris, soris obliquis oblongis, stipitibus pilosiusculis.

Grammitis Organensis. *Gardn. Herb. Bras. n.* 5913.

Hab. On rocks and on the stems of small trees, in a ravine near the summit of the Organ Mountains, Brazil. March 1841.

Frondes fasciculatæ, 6-8-pollicares, lineares, obtusæ, glabræ, profunde crenato-serratæ, basi attenuatæ. *Stipites* pilosi. *Venæ* internæ, furcatæ, venulis apice clavatis, superiore fructifera. *Sori* oblongi, obliqui. *Receptaculum* pilosum. *Indusium* nullum.

This elegant and well marked species of *Grammitis* belongs to Presl's second division of the genus, and is easily distinguished from the other species which that section contains, by its deeply crenato-serrated fronds.—*G. Gardner.*

Fig. 1. Fertile laciniæ; one with the sorus removed. *f.* 2. Capsule. *f.* 3. Sporules:—*magnified.*

TAB. DX.

Pæpalanthus distichophyllus. *Martius.*

Caulibus erectis strictis ramisque dense foliosis, foliis bifariam imbricatis lanceolatis acutis cum mucrone concavis ciliatis, pedunculis solitariis lateralibus, capitulis hemisphericis vaginis subtruncatis mucronatis.

Pæpalanthus distichophyllus. *Mart. in nov. act. Acad. Nat. Cur.* xvii. *t.* 23. *Kunth, Enum. Plant.* 3, *p.* 518. *Gardn. Herb. Bras. n.* 5259.

Hab. In moist, sandy, bushy places, on mountains near Ciudade Diamantina, the capital of the Diamond district, Brazil. July, 1840. On the Serra de Itambé. *Martius.*

Herbaceus. *Caulis* erectus, ramosus, foliosus, bipedalis. *Folia* dense bifariam imbricata, concava, lanceolata, acuta, mucronata, glabra, margine ciliata. *Pedunculi* laterales, solitarii, tenues, glabri, 6-8-pollicares. *Vaginæ* glabræ, apice scariosæ, 10-14-lineas longæ. *Capitula* hemispherica, albo-villosa. *Bracteæ* involucrantes steriles obovato-oblongæ, obtusæ, mucronatæ, glabræ; *bracteæ* flores stipantes oblongæ, obtusæ, apicem versus pilis albis dense ciliatæ. *Receptaculum* glabrum. *Flores masculi* cum fœmineis mixti, pedicellati: *sepala exteriora* oblonga, obtusa, apice pilis ut in bracteis vestita; *interiora* in tubum obconicum, apice trilobum connata. *Stamina* 3. *Antheræ* flavæ. *Flores fœminei* sessiles: *sepala* 3 exteriora obovata, obtusa, apice pilorum fasciculo vestita; 3 interiora minora, pilosissima. *Stylus* generis. *Stigmata* 3, simplicia.

My specimens agree, in every respect, with the description given by Martius, except in the leaves, which he states to be rather obtuse, while here they are certainly acute.—*G. Gardner.*

Fig. I. Capitulum. *f.* 2. Male flower. *f.* 3. Female flower. *f.* 4. The same with the bractea laid open:—*magnified.*

3

TAB. DXI.

Lupinus arenarius. *Gardn.*

Suffruticosus erectus ramosus, molliter et adpresse sericeo-villosus, foliis exstipulatis petiolatis integris oblongis ellip-tisve utrinque obtusis, floribus dense spicatis, calycis bibracteati labio superiore profunde bifido, inferiore breviter 3-dentato, legumine dense adpresse sericeo-villoso.

Lupinus arenarius. *Gardn. Herb. Bras. n.* 4500.

Hab. In elevated sandy campos; on a mountain tract to the north of the Diamond district, Brazil. July, 1840.

This beautiful spe ies of Lupine, whieh grows about two feet high, covers large tracts in its native country, and is very conspicuous from its long spikes of blue flowers. It is nearly related to *L. velutinus* (*Benth. in Ann. Nat. Hist.* 3, *p.* 430), but differs in the shape of the leaves, in having no stipules, and by the lower lip of the calyx being trifid. Another species in my collection, also allied to it, may be thus characterized :—

Lupinus *attenuatus ;* suffructicosus erectus ramosus, foliis exstipulatis petiolatis integris lineari-oblongis obtusis mucronatis basi longe attenuatis utrinque villosis valde nervosis nitidis, floribus dense spicatis, calycis bibracteolati lobo superiore bifido inferiore integro.

Lupinus attenuatus. *Gard. Herb. Bras. n.* 4501.

Hab. Rare in mountain tracts, in the Diamond district, Brazil, and on the Serro do Frio. July, 1840.

This species comes very near *L. coriaceus* (Benth. in loc. cit.) and may only be a villous variety; but I have not had an opportunity of comparing my specimen with Mr. Bentham's, which was collected near Tijuco, by Vauthier.—*G. Gardner.*

Fig. 1. Calyx and Pistil :—*magnified.*

TAB. DXII.

Pæpalanthus speciosus. *Gardn.*

Caule ramoso dense folioso, foliis caulinis semiamplexicaulibus erecto-patentibus lanceolato-acuminatis cuspidatis extus pilosiusculis intus glabris margine junioribus præsertim ciliatis, pedunculis hirsutis, vaginis glabris profunde bifidis apice subciliatis.

Pæpalanthus speciosus. *Gardn. Herb. Bras. n.* 5244.

Hab. On rocky mountain declivities, to the north of the Diamond district, Brazil. July 1840.

Suffrutex 4-5-pedalis, ramosus, dense foliosus, ad insertiones foliorum pilosus. *Folia* basi dilatata caulem semiamplectentia, erecto-patentia, lanceolato-acuminata, cuspidata, striata, supra concava glabra, subtus convexa pilosiuscula, juniora præsertim margine pilis albis ciliata, 2-3 pollicaria. *Pedunculi* creberrimi, circiter 300, umbellati, æquales, 2-pollicares, hirsuti. *Vaginæ* glabræ, bifidæ, apice subciliatæ. *Capitula* hemispherica, albolanata, magnitudine seminis piperis nigri. *Bracteæ* involucrantes steriles, breves, obovato-oblongæ, ciliatæ; *bracteæ* flores stipantes oblongæ, obtusæ, apice ciliatæ. *Receptaculum* pilosum. *Flores masculi* et fœminei mixti; illi pedicellati: *sepala* 3 exteriora oblonga, obtusa, ad apicem pilosa: 3 interiora in tubum obconicum apice trilobum concreta, acuta. *Antheræ* subrotundæ, flavæ. *Flores fœminei* sessiles: *sepala* 3 exteriora, oblonga, obtusa, ad apicem pilosa; 3 interiora exterioribus simillima. *Pistillium* generis. *Stigmata* 3, filiformia, simplicia.

This, which is by far the finest species of the now numerous tribe to which it belongs, is often five feet high, and thickly branched down to the ground, each branch bearing a large yellowish ball-shaped umbel at its extremity. It is easily distinguished, at first sight, from *P. Maximiliana*, Künth, by its shorter peduncles, and more slender habit.—*G. Gardner.*

Fig. 1. Head of flowers. *f.* 2. Male flower. *f.* 3. Female flower. *f.* 4. The same more expanded:—*magnified.*

TAB. DXIII.

Sisyrinchium incurvatum. *Gardn.*

Caule erecto simplici subflexuoso latissime ancipiti-alato folioso, foliis ensiformibus falcatis apice obtusiusculis incurvatis alisque tenuistriatis, spatha diphylla terminali, pedunculis 2-3 aggregatis, perianthio glabro luteo, capsulis globosis.

Sisyrinchium incurvatum. *Gard. Herb. Bras. n.* 5890.

Hab. In open grassy places, near the summit of the Organ Mountains, Brazil. March, 1840.

Caulis erectus, pedalis et ultra, subflexuosus, simplex, utrinque lato-alatus, foliosus. *Folia* vix bipollicaria, 5-6-lin. lata, ensiformia, basi equitantia, subfalcata, acutiuscula, incurvata, striata. *Spatha* diphylla, bracteis foliiformibus. *Pedunculi* 2-3 ex eâdam spathâ. *Germen* inferum, globosum. *Perianthii* laciniæ 6, obovatæ, glabræ, flavæ. *Capsula* globosa, erecta.

This species has very much the habit and appearance of *S. alatum*, Hook. (Tab. 219 of this work), also found by me on the Organ Mountains; but differs in its more robust habit, broader, more obtuse, and more incurved leaves, and globose capsule.—*G. Gardner.*

TAB. DXIV.

Escallonia Organensis. *Gardn.*

Glabra, ramis erectis, foliis oblongis obtusis basi cuneatis breviter petiolatis supra medium serrulatis leviter resinoso-punctatis, paniculis terminalibus multifloris, calycis tubo puberuli, lobis subulatis, petalis spathulatis.

Escallonia Organensis. *Gardn. Herb. Bras. n.* 5720.

Hab. In clefts of rocks and shallow ravines, near the summit of the Organ Mountains, Brazil. March, 1841.

Frutex ramosus, 2-4-pedalis. *Folia* alterna, breviter petiolata, oblonga, obtusa, basi cuneata, apicem versus serrulata, leviter resinoso-punctata, glabra. *Panicula* terminalis, conferta, multiflora. *Pedunculi* 6 lin. longi, puberuli, sub-triflori. *Pedicelli* pedunculo subæquales, basi bracteati. *Bracteæ* subulatæ, circiter 3 lin. longæ. *Calyx* puberulus; *tubus* hemisphericus, adnatus; *limbus* 5-partitus; laciniis subulatis. *Petala* 5, rosea, spathulata, conniventia, apice tantum patentia. *Stamina* 5. *Antheræ* oblongæ. *Ovarium* adnatum, obconicum, biloculare, multiovulatum. *Stylus* filiformis, persistens, fructu duplo longior. *Stigma* peltatum.

As a species this will range along with *Escallonia Sellowiana*, and *E. Monte-Videnſis*, both of which are also from the South of Brazil.—*G. Gardner.*

Fig. 1. Flower. *f.* 2. The same, from which the petals are removed:—*magnified.*

2

TAB. DXV.

Mouriria arborea. *Gardn.*

Foliis elliptico-oblongis petiolatis longe acuminatis coriaceis glabris impunctatis venis marginalibus distinctis reliquis tenuibus subobsoletis, umbellis axillaribus pauci-2-3-floris, pedicellis calyce longioribus, antheræ calcare elongato.

Mouriria arborea. *Gardn. Herb. Bras. n.* 5704.

Hab. Rare in virgin forests at an elevation of about 3,000 feet, on the Organ Mountains, Brazil. March, 1841.

Arbor circiter 40 pedalis, ramosa. *Rami* dichotomi, ad insertiones foliorum incrassati, teretes, cinerei. *Folia* opposita, petiolata, elliptico-oblonga, longe acuminata, glaberrima, integerrima, coriacea, 3-4-poll. longa, 18-20-lin. lata, venosa, venis lateralibus submarginalibus distinctis, reliquis subobsoletis, costa centrali supra plana, infra canaliculata: color intense viridis, subtus pallidior. *Pedunculi* semiunciales, simplices, axillares, fasciculati, cum bracteis duabus oppositis supra medium ad articulum insertis; *bracteis* brevibus triangularibus, coriaceis, reflexis. *Calyx* coriaceus; tubo hemispherico, basi cum ovario adnato; limbo inæqualiter ab apice usque ad medium rumpente. *Petala* 5, ad marginem tubi calycis inserta, luteo-alba, ovata, acuminata, marginibus undulatis. *Stamina* 10, in marginem calycis tubi inserta, 5 petalis opposita, 5 alterna. *Filamenta* petalis vix longiora. *Antheræ* oblongæ, flavæ, basi incurvatæ, biloculares, apice poris duobus dehiscentes. *Ovarium* basi calycis adnatum, 5-loculare; loculis 4-6-ovulatis, ovulis erectis. *Stylus* filiformis, curvatus. *Stigma* simplex, truncatum. *Fructus* ignotus.

The plant which has been described by De Candolle, under the name of *Olisbea rhizophoræfolia*, and by Hooker *Guildingia pisidoides*, is a true *Mouriria*, and it is to it that the present species is most nearly related. My herbarium still contains some four or five undescribed Brazilian species of this genus.—*G. Gardner.*

Fig. 1, 2. Flowers. *f.* 3. stamens:—*magnified.*

3.
2.

TAB. DXVI.

Luxemburgia ciliosa. *Gardn.*

Foliis confertis longe petiolatis oblongis obtusis setosis basi acutis glanduloso-serratis ciliosis, racemis terminalibus corymbosis multifloris, floribus polyandris.

Luxemburgia ciliosa, *Gardn. Herb. Bras. n.* 5677. Plectandra ciliosa, *Mart. Nov. Gen.* I, *p.* 40.

Hab. In rather moist peaty soil, in open places, along with *Andromedas*, at an elevation of about 5,000 feet on the Organ Mountains, Brazil. March, 1841. Minas Novas, *Martius.*

Frutex pulcherrimus, glaber, 8-12-pedalis. *Rami* teretes. *Folia* alterna, longe petiolata, oblonga, obtusa, setosa, basi acuta, glanduloso-serrata, ciliosa, elongata, penninervia, nitida, $2\frac{1}{2}$-3 poll. longa, 10-12 lin. lata: *petioli* graciles, $1\frac{1}{2}$ poll. longi. *Stipulæ* ciliatæ, caducæ. *Racemi* terminales, corymbosi, multiflori. *Pedicelli* graciles, $1\frac{1}{2}$ circiter lin. longi, infra medium articulati. *Calyx* 5-sepalus; sepalis inæqualibus, oblongis, acutis, deciduis. *Corolla* hypogyna, 5-petala; petalis obovatis, obtusis, luteis. *Stamina* hypogyna, plurima. *Antheræ* subsessiles, extrorsæ, lineares, tetragonæ, in massam concavam secundam coalitæ, deciduæ, apice biporosæ. *Ovarium* trigonum. *Stylus* subulatus, incurvus. *Stigma* simplex. *Capsula* trigona, unilocularis, trivalvis, valvarum marginibus introflexis seminiferis. *Semina* plurima, margine hinc et ad apicem alato.

This shrub is, perhaps, one of the most beautiful which I met with in Brazil. Its elegant light-green shining foliage, and its large corymbs of yellow flowers, would make it a most desirable plant for cultivation in this country: and I am happy to say, that it has been raised both at Kew and Glasgow, from seeds brought home by me. The structure of the margin of the leaf is rather curious. The cilia and the glandular serratures are quite distinct from each other; the latter taking their origin from an union of the primary veins with one which surrounds the leaf, while the former arise from the inosculation of a small primary vein with the lateral branches of the larger ones.—*G. Gardner.*

Fig. 1. Flower. *f.* 2. Section of the ovary. *f.* 3. Portion of a leaf:—*magnified.*

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TABS. DXVII.—DXVIII.

Thaumasia? Cunninghami.

Gen. Char. *Frons* membranacea sordide rubra, costis corneis, rigidis articulatis reticulatis percursa. *Endl. N.* 103.

Thaumasia *Cunninghami;* fronde corneâ ramosissimâ, ramis alternis alatis hic illic anastomosantibus, ramulis bifidis spinæformibus patentibus marginatis, axillis rotundatis.

Hab. On the shores of New Zealand. *Allan Cunningham, Esq. in Herb. Heward.*

Frond 12-14 inches long, divided from the base in an irregular manner, into several principal branches, whose lesser divisions anastomose together. The branches are furnished with a cylindrical midrib, composed of a very dense, horny, semi-transparent substance, perfectly continuous, and scarcely exhibiting a cellular structure to the microscope, but apparently composed of concentric layers of glue. The margin, or frond, is of a much thinner and more gelatinous composition, but seems to be of similar structure. Here and there an areole, formed by the anastomosing branches, is filled up by this membrane. This production is one of those anomalous ones that it is difficult to find an appropriate place for in the system; and I am doubtful if it can be consistently referred to *Thaumasia,* though it appears to approach that equally doubtful genus, more nearly than to any other. There is one principal difference, however:—the skeleton is inarticulate. The European genus, *Alcyonidium,* does not appear to be far removed; and the reasons which induced me in the *British Flora* to reject that genus from the Vegetable Kingdom, apply with equal force to our present subject.—*W. H. Harvey.*

Fig. 1. Portion of the plant:—*magnified.*

TABS. DXIX.–DXX.

Bowmania verbascifolia. *Gardn.*

Bowmania verbascifolia. *Gard. in Hook. Lond. Journ. of Bot., vol.* 2, *ined. Herb. Bras. n.* 5797.

Hab. Bushy places, at the summit of the Organ Mountains, Brazil. *Fl.* April.

This very fine composite plant has been selected by Mr. Gardner to commemorate the name of his excellent friend, the late J. E. Bowman, Esq., of Manchester, a gentleman no less known by his botanical, than his geological labours. He considers it to hold an intermediate station between *Trixis* and *Chabræa*, differing from this latter in having an involucre of several series of scales, a deeply alveolate and pilose receptacle, and a pappus of more than one series, and from the former in its possessing a many-flowered capitulum, and a foliaceous involucre of several series.

The full generic character and description will very shortly appear in the second volume of the London Journal of Botany.

Fig. 1. Floret. *f.* 2. Stamens. *f.* 3. Apex of style. *f.* 4. Achenium. *f.* 5. Hairs from the pappus:—*magnified.*

TAB. DXXI.

Lupinus parvifolius. *Gardn.*

Fruticosus erectus ramosus, ramis dense foliosis, foliis integris sessilibus exstipulatis ellipticis oblongisve acutis basi obtusis utrinque adpresse sericeo-villosis, floribus dense spicatis, calycis bibracteolati labio superiore bifido inferiore tridentato.

Lupinus parvifolius. *Gard. Herb. Bras. n.* 4502.

Hab. In narrow rocky valleys, near Cidade Diamantina, the capital of the Diamond district, Brazil. Aug. 1840.

Frutex 6-pedalis, ramosissimus. *Rami* dense foliosi. *Folia* 8-12 lin. longa. *Spica* contracta. *Flores* cœrulei. *Legumen* 2-4 spermum, valde adpresse sericeo-villosum.

Another species in my Herbarium, allied to this, may be characterized as follows :—

Lupinus *decurrens;* fruticosus, decumbens, dense lanuginoso-villosus, foliis sessilibus decurrentibus oblongis acutis, calycis bibracteolati labio superiore bifido inferiore tridentato, legumine villoso 4-5-spermo.

Lupinus decurrens. *Gardn. Herb. Bras. n.* 4503.

Hab. In elevated mountain campos, near the capital of the Diamond district, Brazil. Aug. 1840.—*G. Gardner.*

Fig. 1. Calyx and pistil :—*magnified.*

Tab. DLV.

TAB. DXXII.

Turnera dichotoma. *Gardn.*

Fruticosa dichotoma, foliis sessilibus late ovatis cordatis acutis coriaceis margine reflexis erecto-patentibus supra glabris nitidis subtus albo-villosis, pedunculis axillaribus terminalibusque confertis unifloris liberis, bracteolis linearibus, calycibus, strigoso-pilosis.

Turnera dichotoma. *Gardn. Herb. Bras. n.* 4695.

Hab. On bare elevated tracts, in the Diamond district of Brazil. Aug. 1840.

Fruticulus pedalis et ultra, ramosus. *Rami* dichotomi, dense foliosi. *Folia* alterna, sessilia, late ovata, cordata, acuta, coriacea, marginibus reflexa, erecto-patentia, supra glabra, nitida, subtus dense albo-lanuginosa, 3-4 lin. longa, 3 lin. circiter lata. *Pedunculi* axillares terminalesque, confertocapitati, uniflori, liberi. *Flores* bibracteolati, bracteis linearibus, pilosis. *Calyx* tubulosus, quinquefidus, strigoso-pilosus. *Petala* 5, lutea, ovato-oblonga, ad faucem tubi calycis inserta, calycis laciniis subæqualibus. *Stamina* 5, inclusa ; *filamenta* ad basin tubi calycis inserta. *Antheræ* oblongæ. *Ovarium* villosum. *Styli* 3, apice multifidi.

The specimen here represented does not give a good idea of the habit of this plant, the stems being dichotomously divided three or four times. Another species, from the same locality, may be distinguished thus :—

Turnera *procumbens;* fruticosa procumbens, foliis confertis petiolatis anguste linearibus obtusis (4 lin. circiter longis) margine reflexis supra nitidis utrinque petiolisque pilosiusculis, pedunculis petiolo connatis unifloris, bracteolis lineari-subulatis, calycibus strigoso-pilosis.

Turnera procumbens. *Gardn. Herb. Bras. n.* 4696.

Hab. In elevated campos, near Cidade Diamantina, Province of Minas Geraes, Brazil. Aug., 1840.

Fig. 1. *Turnera dichotoma.* Flower, with the calyx and corolla laid open. *f.* 2. Flower and bracteas :—*magnified.*

TAB. DXXIII.

Pæpalanthus uncinatus. *Gardn.*

Erectus brevis simplex, foliosus, foliis confertis lineari-lanceolatis acutis pubescentibus ciliatis demum glabratis inferioribus patentibus, pedunculis 4-5 compressis striatis vaginisque pilosis, his apice oblique fissis acutis, capitulis hemisphericis, bracteis involucrantibus ovato-lanceolatis acuminatis pungentibus stellato-patentibus flores superantibus, stigmatibus simplicibus.

Pæpalanthus uncinatus. *Gardn. Herb. Bras. n.* 5266.

Hab. In sandy campos, Serro do Frio, Diamond district, Brazil. Aug. 1840.

Caudex brevis, erectus, dense foliosus. *Folia* lineari-lanceolata, acuta, pubescentia, ciliata, demum glabrata, bipollicaria. *Pedunculi* 4-5, rigidi, striati, pilosi. *Vaginæ* 2-pollicares, apice oblique fissæ, acutæ, pilosæ, folia juniora excedentes. *Capitula* hemispherica. *Bracteæ* involucrantes steriles, lanceolatæ vel lanceolato-ovatæ, acuminatæ, radiatæ; bracteæ flores stipantes lanceolatæ longe acuminatæ, pilosæ, apice uncinatæ. *Receptaculum* pilosum. *Flores masculi* pedicellati, cum fœmineis mixti: *sepala* 3 exteriora lanceolata, acuminata, glabra; *exteriora* in tubum obconicum, apice trilobum connata. *Stamina* 3. *Antheræ* oblongæ, flavæ. *Flores fœminei* sessiles, pauci: *sepala* 3 exteriora lanceolata, acuminata, glabra; interiora simillima, sed tenuiora. *Pistillum* generis. *Stigmata* 3, simplicia.—*G. Gardner.*

Fig. 1. Male flower. *f.* 2. female ditto:—*magnified.*

TAB. DXXIV.

Pæpalanthus laricifolius. *Gardn.*

Rhizomate crasso repente, caule simplici ad apicem dense folioso, cæteris nudo, foliis radicalibus confertis recurvis linearibus glabris, caulinis dense verticillatis, pedunculis fasciculatis vaginisque dense albo-piloso-pubescentibus, his apice oblique fissis acutis.

Pæpalanthus laricifolius. *Gard. Herb. Bras. n.* 5262.

Hab. In elevated sandy campos, on mountain tracts to the north of the Diamond district, Brazil. July, 1840.

Rhizoma crassum, repens, dense foliosum. *Caules* (rami) plurimi, 1½-3-pollicares, teretes, ad apicem dense foliosi, cæteris nudi, glabriusculi. *Folia* radicalia rosulato-congesta, linearia, recurvata, subpollicaria; caulinia ad apicem dense verticillata, erecta, lineari-subulata, pilosissima, subpollicaria. *Pedunculi* 2-4, valde piloso-pubescentes, 10-12 poll. longi. *Vaginæ* apice oblique fissæ, piloso-pubescentes. *Capitula* hemispherica, magna. *Bracteæ* involucrantes steriles, imbricatæ, exteriores obovato-oblongæ, glabræ, membranaceæ, nitidulæ, flores superantes; *bracteæ* flores stipantes lineari-lanceolatæ, acuminatæ, glaberrimæ. *Receptaculum* albo-pilosum. *Flores masculi* cum fœmineis mixti, utrinque pedicellati. *Masc: sepala* 3 exteriora lanceolata, acuminata, glabra; 3 interiora in tubum obconicum trilobum connata. *Stamina* 3. *Antheræ* obliquæ, flavæ. *Flores fœminei: sepala* 3 exteriora anguste lanceolata, acuminata, glabra; interiora exterioribus simillima, sed infra medium pilosa. *Pistillum* generis. *Stigmata* 3, filiformia, simplicia.—*G. Gardner.*

Fig. 1. Male flower. *f.* 2. female ditto :—*magnified.*

TAB. DXXV.

Pæpalanthus rupestris. *Gardn.*

Exiguus, cauliculis cæspitosis ramosis dense foliosis, foliis linearibus acutis pilosis, pedunculis terminalibus paucis glabris, vaginis bifidis pilosis.

Pæpalanthus rupestris. *Gardn. Herb. Bras. n.* 5272.

Hab. In dry shady clefts of rocks, near Cidade Diamantina. the capital of the Diamond district, Brazil. July, 1840.

Caules cæspitosi, conferte ramosi, dense foliosi, 1-2 pollicares. *Pedunculi* 2-5, terminales, filiformes, glabri, sesquipollicares. *Vaginæ* pilosæ apice bifidæ. *Capitula* hemispherica, albo-lanata, grani piperis nigri magnitudine. *Bracteæ* involucrantes steriles, ovatæ, acutæ, pellucidæ; *bracteæ* flores stipantes oblongæ, obtusæ, apice ciliatæ. *Receptaculum* pilosum. *Flores masculi* cum fœmineis mixti, longe pedicellati: *sepala* exteriora bracteis simillima; interiora in tubum obconicum apice trifidum connata. *Stamina* 3. *Antheræ* flavæ. *Flores fœminei* pedicellati: *sepala* exteriora oblonga, apice pilis vestita; interiora simillima. *Pistillum* generis. *Stigmata* filiformia, bifida.

Nearly related to the above, is the following little species from the same locality, and which may be distinguished thus.—

Pæpalanthus *albidus*; pusillus, cauliculis confertis ramosis dense foliosis, foliis linearibus acutis pilosis, pedunculis terminalibus paucis glabris, vaginis pilosis apice bifidis et ciliosis, capitulis hemisphericis parvis albo-lanatis, bracteis involucrantibus ovatis acuminatis pellucidis.

Pæpalanthus albidus. *Gardn. Herb. Bras. n.* 5273.

Hab. In dry clefts of rocks, Diamond district, Brazil. July, 1840.—*G. Gardner.*

Fig. 1. Capitulum. *f.* 2. Leaves and sheath of the peduncle. *f.* 3. Male flower and bracteas. *f.* 4. Female flower and bracteas:—*magnified.*

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TAB. DXXVI.

Pæpalanthus flaccidus. *Kunth.*

Caulibus erectis, ramis simplicibus numerosissimis foliosis, foliis lineari-subulatis mucronatis rigidis margine longe piloso-ciliatis recurvato-patentibus, pedunculis terminalibus fasciculatis filiformibus trisulcis pilosiusculis, vaginis apice oblique fissis acutis glabris, capitulis hemisphericis albo-villosis, floribus dimeris, masculis diandris, antheris bilobis, bracteis calycibusque exterioribus apice albo-pilosis, stigmatibus simplicissimis.

Pæpalanthus flaccidus. *Kunth Enum. Plant.* 3, *p.* 511. *Gardn. Herb. Bras. n.* 5241.

Eriocaulon flaccidum. *Bongard in Act. Petrop. vol.* 6. 1. *p.* 636, 643, *t.* 4.

Hab. In moist sandy places, near Cidade Diamantina, the capital of the Diamond district, Brazil. Aug. 1840. Serra da Lappa, Province of Minas Geraes. *Riedel.*

I have not an opportunity of comparing my specimens with the figure given by Bongard, but they agree very well with the description in Kunth's *Enumeratio Plantarum*, the only difference being, that my specimens seem to be smaller and more erect than those collected by my friend M. Riedel in the Gold districts.—*G. Gardner.*

Fig. 1. Capitulum. *f.* 2. Male flower. *f.* 3. Female flower. *f.* 4. Leaf:—*magnified.*

TAB. DXXVII.

Pæpalanthus compactus. *Gardn.*

Caulibus simplicibus brevibus, foliis radicalibus linearibus acutis basi dilatatis supra margineque dense albo-villosis subtus glabriusculis vel versus basin pilosis, pedunculis glabris facile deciduis, vaginis bifidis glabris ad apicem ciliosis.

Pæpalanthus compactus. *Gardn. Herb. Bras. n.* 5247.

Hab. Elevated sandy campos in mountain tracts, beyond the Diamond district. July, 1840.

Radices fibrosæ, nigræ. *Caudex* crassus, densissime foliatus. *Caules* (rami) folia radicalia subæquantes, simplices, erecti, foliosi. *Folia* radicalia cæspitosa, linearia, basi dilatata, acuta, supra albo-pilosa, dense ciliata, subtus glabriuscula, 2-2½ pollicaria; caulina radicalibus simillima, sed multo minora (6-9-lin. longa), sessilia, patentia. *Pedunculi* 100 et plures, dense umbellati, glabri, 4-5 lin. longi. *Vaginæ* glabræ, apice bifidæ, ciliatæ. *Capitula* hemispherica, magnitudine seminis piperis nigri, albo-lanata. *Bracteæ* involucrantes steriles, oblongæ, apicem versus glabræ, dense ciliatæ; bracteæ flores stipantes lineari-oblongæ, ad apicem dense villosæ. *Receptaculum* pilosum. *Flores masculi* pedicellati: *sepala* exteriora oblonga, obtusa, apice pilis simplicibus crassiusculis obtusis albo-flavicantibus ornata et ciliata; interiora in tubum obconicum apice inciso-laceratum concreta. *Stamina* 3, exserta. *Antheræ* oblongæ, flavæ. *Flores fœminei* sessiles; *sepala* 3 exteriora oblonga, obtusa, apice ciliata; interiora exterioribus similia, sed paulo angustiora, acutiora, et tenuiora. *Pistillum* generis. *Stigmata* 3, filiformia, simplicia.

This species of *Pæpalanthus* belongs to the division *umbellati* of Bongard; and is allied to *P. Bahiensis* of Kunth, *Enum.* 3, *p.* 517.—*G. Gardner.*

Fig. 1. Peduncle, sheath and capitulum, *f.* 2. Male flower. *f.* 3. Female ditto:—*magnified.*

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TAB. DXXVIII.

Cladocaulon Brasiliense. *Gardn.*

Gen. Char. *Flores* capitati, androgyni, singulo bractea stipato, centrales masculi, marginales fœminei. *Mas. Perigonium* exterius triphyllum, interius tubulosum, limbo trilobo. *Stamina* 3, perigonii interioris tubo inserta, longe exserta. *Antheræ* ovatæ, biloculares, introrsæ. *Fem. Perigonium* duplex; exterius trisepalum; *sepala* lineari-oblonga, apice pilosa, basi connata, demum rigidulo-membranacea, reflexa, decidua; interiora exterioribus similia sed breviora, tenuiora, erecta et persistentia. *Ovarium* globosum triloculare. *Stylus* elongatus *Stigmata* 3, filiformia, simplicia. *Capsula* trilocularis, loculicida.—Suffrutex *Braziliensis, erectus, ramosissimus, foliosus; ramis teretibus; foliis lineari-subulatis, deflexis, pilosis, demum glabratis; pedunculis axillaribus, geminis, versus apicem ramorum congestis.*

Cladocaulon Brasiliense. *Gardn. Herb. Bras. n.* 5250.

Hab. Rare on the ascent of the Serra da Mendanha, from the Rio Jiquitimhonha, Diamond district, Brazil. July, 1840.

Suffrutex ramosissimus. *Folia* deflexa, 7 lin. circiter longa, pilosa, basi albo-villosa, demum glabrata. *Pedunculi* laterales, gemini, breves, pilosi, 7 lin. longi. *Vaginæ* glabriusculæ, apice oblique fissæ, et villosæ. *Capitula* hemispherica, albolanata, magnitudine pisi minoris. *Bracteæ* involucrantes steriles, latæ, ovatæ, obtusæ, nitidæ, pilosiusculæ, apice albopilosæ; bracteæ flores stipantes oblongo-lanceolatæ, apice dense pilosæ. *Receptaculum* pilosum. *Flores* ut in char. gen.

The remarkable habit of this plant, as well as the curious structure of the female flowers, justly entitle it to rank as a distinct genus. The habit is well represented by the artist, but the dissections are very far from being correct. The female flower I always find to be such as is given in the description, and not that of a true species of *Pæpalanthus*, as represented in the plate. Nor are the lobes of the inner series of the perianth of the male flower pilose.—*G. Gardner.*

Fig. 1. Capitulum, from beneath the apex of a branch. *f.* 2. Male flower. *f.* 3. Female flower; (*incorrectly represented*, according to the above description) :—*magnified.*

3

TAB. DXXIX.

Smilacina flexuosa.

Glaberrima, caule elato strictiusculo, foliis bifariam insertis subsecundis rotundato-ovatis brevi-acuminatis petiolatis, petiolo basi-subauriculato-decurrente, racemo simplici terminali nutante, rachi flexuoso geniculato, pedicellis patentibus longitudine floris, sepalis obovatis basi attenuatis patentibus.

Hab. Guatemala (probably the mountain districts). *G. U. Skinner, Esq.*

This is extremely different from any known species of *Smilacina* of North America; nor has any been supposed to exist, except in the northern parts of that vast continent. The present species was introduced by seeds from Guatemala, to the Botanic Garden of Glasgow. Its nearest affinity is doubtless with an East Indian species, the *Smilacina purpurea*, Wall. Pl. As. Rar. v. 2, tab. 144, from Nepaul; but that has a perfectly straight and very downy rachis and pedicels to the raceme, and differently formed sepals.

Fig. 1. Flower. *f.* 2. Transverse section of a germen:—*magnified.*

TAB. DXXX.

Manihot Grahami.

Foliis profunde palmato-multifidis, lacinis 5-13 lanceolatis integerrimis subtus glaucis, petiolis nervisque viridibus, paniculis densis folio brevioribus, floribus (magnis flavo-viridibus) campanulatis.

Janipha Lœflingii. *Graham in Ed. Phil. Journ.* June, 1840. (*excl. Syn.*)—β multifida.

Hab. Woods of the Parana. *Tweedie.*

This evidently belongs to the esculent group of *Manihots*, of which the *Jatropa Manihot*, Linn., may be considered the type. Dr. Graham has referred it to the *Janipha Lœflingii*, Humb. (*Jatropha Janipha*, Linn.); yet I think it has no real connexion with that species; and I was myself rather disposed to look upon it as a var. of the real *Manihot* (figured in Bot. Mag. Tab. 3071.) But I now possess several native specimens, all from the same locality, and I have seen various cultivated ones raised from seeds, gathered on the Parana, and these retaining all their peculiarities, that I am rather disposed to consider it a distinct and a new species. At the same time, it is very difficult to define the essential characters. It is scarcely necessary to compare it with any but *Manihot Api*, Pohl. (*Jatropa Manihot*. Linn.), *M. utilissima*, Pohl. (equally the *J. Manihot*, Linn., for they seem to differ only in the poisonous or innocuous qualities) and the *M. flabellifolia*. From all these our plant differs in the more flaccid habit, in the more numerous segments of the leaves, in the entire absence of purple on the petioles and nerves and flowers, in the much greater size of the perianth, which, both in the male and female flowers, are pale yellow green, with two red streaks in the middle of each segment. The eye distinguishes the species at once even in the dry state.

Fig. 1. Pistil and hypogynous gland. *f.* 2. Section of a male flower :—*magnified.*

TAB. DXXXI.

Oakesia Conradi. *Tuck.*

Gen. char. *Flores* dioici. *Masc. Cal.* triphyllus, deciduus, foliolis membranaceis, equitantibus, apice obtusis, basi attenuatis, extus bracteâ squamæformi munitus. *Corolla* tenuissime membranacea cyathiformis, apice truncata et minutissime denticulata, longitudinaliter fissa, deinde diphylla *Stamina* 3 longe exserta. *Antheræ* globoso-didymæ, biloculares, loculis per rimam longitudinalem lateraliter dehiscentibus.—*Fæm. Cal.* triphyllus, persistens ; foliolis membranaceis equitantibus, apice dilatatis, obtusis ; extus bracteâ aridâ squamæformi cinctus. *Corolla* diphylla foliolis equitantibus. *Ovarium* urceolatum, basi attenuatum, triloculare, loculis uniovulatis. *Ovula* erecta anatropa. *Discus hypogynus* nullus. *Stylus* tenuis, brevi-exsertus, apice trifidus, laciniis subulatis, recurvis, intus stigmatosis. *Fructus* parvus drupaceus, siccus depresso-globosus tri-abortu-dipyrenus, pyrenis cartilagineis monospermis. *Semen ?* — Fructiculus *Boreali-Americanus, depressus, ramosissimus, ramis retroflexis, tenuibus ; foliis verticillatis ternis quaternisve patentibus, convexo-planis, anguste linearibus, obtusiusculis, margine apiceque evanescente scabriusculis, dorso longitudinaliter sulcatis floribus dioicis, terminalibus, glomeratis, sessilibus ; capitulis extus squamis aridis cinctis. Klotzsch.*

Oakesia Conradi. *Tuckerm. in Hook. Lond. Journ. of Bot. v.* 1, *p.* 446.
Ceratiola ericoides. *Herb. Lamb.*
Empetrum Conradi. *Torr. in Ann. Lyc. N. Y.*
Tuckermania Conradi. *Klotzsch in Wiegmann's Archiv. April,* 1842.
Hab. Newfoundland, *Cormack ;* New Jersey, *Conrad, Rafinesque ;* Plymouth, Massachusetts, *Oakes, Tuckerman, Russel;* Kennabeck R. Maine, *Nuttall.*

My specimens of this interesting plant are unfortunately deficient in fruit ; nor are the flowers in so good a state as I could desire, which I regret the more, as I do not find them to accord so well with my friend Dr. Klotzsch's description as I would wish. For my only flowering specimens I am indebted to Mr. Tuckerman. That gentleman has paid a well-merited compliment to his countryman, Mr. Oakes, in naming this genus after him.

Fig. 1. Upper, and *f.* 2. underside of a leaf. *f.* 3. Head of male flowers. *f.* 4. Single male flower. *f.* 5. Abortive pistil of ditto. *f.* 6. Head of female flowers. *f.* 7. Single female flowers. *f.* 8. Pistil :—*magnified.*

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TAB. DXXXII.

Chara latifolia. *Willd.*

Caulibus spongiosis semipellucidis minutissime granulatis, junioribus sæpe muricatis, ramulis verticillatis foliosis, foliis ovali-oblongis mucronato-acutis, antheris ebracteatis, fructu bracteis tribus linearibus suffulto.

Chara latifolia. "*Willd. in Mey. d. Ges. Nat. Freunde. B.* 3." *Meyer in Linnæa, v.* 2, *p.* 79. *Hook. in Lond. Journ. of Bot. v.* 1, *p.* 43.

Hab. Belvidere Lake, Co, Westmeath, Ireland. *Mr. D. More.*

I had the pleasure of announcing this discovery of a new *Chara* to the British Flora, in the 1st. vol. of the London Journal of Botany. At that time Mr. More had not detected the fruit; but since, he has been more fortunate, and has thus enabled me to represent perfect specimens of a species never before figured. It is at once distinguished by its broad and sedum-like leaves. I find no bractea at the base of the (so-called) anthers; but on the opposite side of the branch, where the anther is produced, are two or three small raised points. Three similar points are opposite the three bracteas of the fruit.

Fig. 1. Apex of a young fertile plant. *f.* 2. Smaller portion, with anther, seen in front. *f.* 3. Back view of the same branch. *f.* 4. Portion from which the anther is removed, showing its receptacle. *f.* 5. Portion of the contents of an anther. *f.* 6. Fruit-bearing branch. *f.* 7. Back view of the same. *f.* 8. Fruit. *f.* 9. Contents of the nucule:—more or less *magnified.*

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TAB. DXXXIII.

Marsippospermum grandiflorum.

Gen. Char. *Sepala* 6 subulato-lanceolata canaliculata, inæqualia, erecto patentia, canaliculata, persistentia, basi bracteis 3 membranaceis suffulta. *Stam.* 6, sepalis breviora. *Filamenta* brevissima. *Antheræ* oblongæ. *Pistillum* longitudine sepalorum breviorum. *Germen* oblongum, obtuse trigonum, stylo gracili subduplo longius. *Stigma* longitudine styli, inferne dilatatum ad basin in ramis tribus erectis rigidis fissum. *Capsula* sepalis persistentibus duplo brevior, subprismatica, oblonga, acutissima apice dehiscens, trifida, unilocularis. *Semina* receptaculis 3 parietalibus affixa, numerosa, arillata utrinque acuminata.—Planta *rigida cæspitosa, unifoliata, folio radicali basi vaginato, tereti: culmo unifloro.*

Marsippospermum *grandiflorum.*

Marsippospermum calyculatum. *Desv. Journ. de Bot. v.* 1, *p.* 330.

Juncus grandiflorus. *Linn. Fil. Suppl. p.* 209.—*Forst. Comm. Goett.* 9, *p.* 27, *t.* 3. *Lam. Cycl.* 3, *p.* 266. *Roem. et Sch. Syst. Veget.* 7, *p.* 248.

Hab. Straits of Magellan, *Forster.* Falkland Islands, *D'Urville, Mr. Wright.*

The habit of this plant is so peculiar, and the size and texture and structure of the flower so different from any other *Juncus,* that I cannot but think Desvaux was correct in raising it to the rank of a genus, although it has not been adopted by succeeding authors. It probably grows larger in the Straits of Magellan than in the Falkland Islands; for the inhabitants are said by Forster to make cordage and baskets of its tenacious leaves and culms. The ripe fruit I have not seen.

Fig. 1. Flower, with its three bracteas. *f.* 2. Pistil. *f.* 3. Germen, cut through transversely. *f.* 4. Stamen:—*magnified.*

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TAB. DXXXIV.

Tetroncium magellanicum. *Willd.*

Gen. Char. *Flores* dioici. *Perianthium* hexaphyllum foliolis subcoloratis, ovato-concavis, tribus inferioribus altius insertis. *Stamina* 6, foliolorum perianthii basi inserta: *filamenta* brevissima: *antheræ* extrorsæ, medio dorso affixæ. *Fœm. Perianthium* maris. *Stamina* 6. *Germen* ovato-acuminatum, 4 sulcatum (abortu 3) 4-loculare, (loculis uniovulatis), in stylis 3-4 subulatis sensim attenuatum. *Stigmata* simplicia. *Capsula* quadri-(abortu 3) locularis. *Semen* solitarium, erectum, basi affixum in loculi fundo. Herba *pusilla cæspitosa perennis, caudibus repentibus ramosis foliosis, basi squamis scariosis nitidis tecta.* Folia *disticha plana subequitantia, lineari-acuminata.* Scapus *terminalis, apice spicatus ; fructibus arcte deflexis.*

Tetroncium Magellanicum. *Willd. in Berl. Mag.* 2. 17.
Triglochin reflexum. *Vahl.*
Cathanthes, *Rich.*

Hab. Straits of Magellan. *Forster.* Falkland Islands. *Mr. Wright.*

The first aspect of this plant is rather that of *Carax pulicaris* or some allied species of that genus, than of Triglochin, from which genus I think it may fairly be separated, no less on account of its peculiar habit, which is harsh and rigid, than of its diœcious flowers, reflexed and tetramerous fruit. I possess only specimens with immature fruit.

Fig. 1. Portion of the spike with capsules. *f.* 2. Capsule with one of the cells laid open. *f.* 3. Transverse section of a capsule :—*magnified.*

TAB DXXXV.

Tillæa moschata. *D.C.*

Caule prostrato repente basi ramoso, foliis connatis obovato-oblongis, floribus quadrifidis ad axillas superiores breviter pedunculatis, petalis obovatis filamentis dilatatis, carpellis ovato-globosis.

Tillæa moschata. *De Cand. Prodr. v.* 3. *p.* 382.
Crassula moschata. *Forst. Act. Goett.* 9. *p.* 26.
Bulliarda Magellanica. *De Cand. Bull. Philom. n.* 49.
Bulliarda moschata. *D'Urville Fl. des Malouin. p.* 618.

Hab. Straits of Magellan. *Forster.* Moist springy places among rocks, Falkland Islands. *D'Urville. Mr. Wright.*

The habit of the plant is that of our well-known *Montia fontana.* It is, I think, rightly referred by De Candolle to *Tillæa.* I find no hypogynous scales in my specimens: but it is difficult to see such minute parts in dried plants of so succulent a nature as the present. D'Urville describes 4 triangular nectaries; and he consequently places this plant in the genus *Bulliarda.* D.C.

Fig. 1. Portion of the stem with leaves. *f.* 2. 3. Flowers. *f.* 4. Stamen. *f.* 5. Pistils:—*magnified.*

TAB. DXXXVI.

Lysimachia repens. *D'Urv.*

Caule repente ramosissimo, foliis obovatis subcarnosis basi attenuatis, floribus axillaribus solitariis brevi-pedunculatis, staminum filamentis inferne coalitis glabris.

Lysimachia repens. *D'Urv. Fl. des Iles Malouin. p. 606.*

Hab. Falkland Islands; margins of springs and streamlets. *D'Urville. Mr. Wright.*

No author but D'Urville seems hitherto to have noticed this pretty little plant, which at first has altogether the appearance of our well-known *Bog-Pimpernel:* but the stamens are very peculiar, and will at once distinguish it from that, as well as from the Chilian *Anagallis alternifolia*, Cav. I should have placed it in the genus *Anagallis*, only that D'Urville speaks of the dehiscence of the fruit as decidedly that of a *Lysimachia.*

Fig. 1. Flower. *f.* 2. The same, more expanded. *f.* 3. pistil:—*magnified.*

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TAB. DXXXVII.

Celastrus magellanicus.

Foliis ovatis seu ovato-lanceolatis acutis obtuse serratis coriaceis subtus pallidis subglaucis breviter petiolatis, pedunculis axillaribus brevibus unifloris medio bibracteolatis, bracteolis fimbriatis, capsula obcordata compressa, biloculari 2-sperma.

Celastrus ? Magellanicus. *De Cand. Prodr.* 2. *p.* 8. Cassine Magellanica. *Lam. Ill. n.* 2590. *Encycl. Suppl. v.* 2. *p.* 130.

Hab. Straits of Magellan. *Commerson. Capt. King.*

Our specimen is from Capt. King's collection, formerly in the possession of Mr. Lambert. The leaves are perhaps broader than will justify the expression of "ovato-lanceolata," as given to this species by Lamarck; but there is every reason to believe it is only a slight variety of his species. The fruit seems to be truly that of a *Celastrus*.

Fig. 1. Fruit. *f.* 2. The same bursting open. *f.* 3. Seed, with its arillus:—*magnified.*

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TAB. DXXXVIII.

Colletia discolor.

Spinescens, foliis oppositis ellipticis obscure serratis in petiolum brevem attenuatis subtus glaucis, pedunculis axillaribus nutantibus solitariis unifloris, calyce 4-fido, fructu 3-cocco 3-spermo.

Hab. Port Famine, Patagonia. *Capt. King.*

This little shrub has many characters in common with the *Condalia microphylla*, Cav. from Chili: but the size and structure of the flowers and of the fruit are different, and the leaves are much less pointed than in that plant. It is indeed unquestionably a *Colletia*, having all the characters of that genus, unusually leafy it must be confessed; and the leaves are glaucous, or almost white beneath.

Fig. 1. Flower. *f.* 2. The same, laid open. *f.* 3. Fruit. *f.* 4. Fruit cut open transversely, showing the seeds:—*magnified.*

TAB. DXXXIX.

Azorella trifurcata. *Gærtn.*

Densissime cæspitosa, foliis glabris rigidis tripartitis laciniis subæqualibus late subulatis cuspidatis, petiolo dilatato-vaginato filamentis tenuissimis valde deciduis ciliato, umbella subsessili, involucri foliolis parvis subulatis basi coadunatis subciliatis.

Chamitis trifurcata. *Gærtn. Fruct. v.* 1, *p.* 95, *tab.* 22, *f.* 4. (*sub nom. Ch. tricuspidatæ*).

Azorella tricuspidata. *Lam. Illustr. v.* 2, *tab.* 189, *f.* 4, *b.*—*h** (*excl. syn.*) *Dict. Suppl. v.* 1, *p.* 551. (*excl. most of the syn.*)

Hab. Terra del Fuego. *Sir Joseph Banks.* Straits of Magellan. *Captain King.*

This little plant is well figured by Gærtner, from specimens in Sir Joseph Banks's Herbarium; the fruit and leaf being exactly characteristic of those of our specimens. This figure seems to have escaped the notice of De Candolle; while by Lamarck and Sprengel, who prohably never saw the plant, and the former of whom has given Gærtner's figures, it has been strangely confounded with the *Bolax glebaria*, (See our Tab. cdxcii. of vol. 4). The fruit and leaves are both quite different. Our plant forms very dense tufts; its short branches everywhere clothed with rigid, tricuspidate, spreading or reflexed leaves, quite destitute of pubescence: — the long sheathing bases are, in a young state, and then only, fringed with very slender hairs; the old leaves are perfectly destitute of them. Peduncle very short, not rising above the leaves, bearing a simple umbel of 3-5 flowers, and about as many broadly subulate involucral leaves, united by their bases, and there minutely fringed. Petals ovate, involute. Fruit quite glabrous, ovate, slightly compressed laterally, scarcely so at the back, so that the transverse section is oval or elliptical. Each mericarp has five stout, nearly equidistant, ribs, the lateral ones at the commissure.

Fig. 1. Front, and—*f.* 2. back view of a leaf, the marginal ciliæ having fallen away. *f.* 3. Flower. *f.* 4. Fruit. *f.* 5. Section of ditto:—*magnified.*

* Copied from Gærtner.

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TAB. DXL.

Escallonia serrata. *Sm.*

Glabra, foliis obovatis obtusis serratis costatis aveniis (subtus præcipue), floribus solitariis terminalibus, petalis oblongo-obovatis, ovario semilibero.

Escallonia serrata. *Sm. Icon. Ined.* 2, *t.* 31. *De Cand. Prodr.* 4, *p.* 3.

Stereoxylon serratum. *Poir. Dict.* 7, *p.* 435.

Hab. Straits of Magellan. *Commerson.* Terra del Fuego. *Menzies.* Port Famine. *Capt. King.*

A small shrub, with short, flexuose, rigid branches, and leaves which are often in clusters or rosulated, scarcely ½ an inch long, obovate, subcoriaceous, nearly sessile, serrated, obtuse, costate, but except the costa, or midrib, there are no evident veins. At the apex of the branchlets appears a solitary flower, on a short peduncle. Calyx ½ superior, the short obconical tube being incorporated with the ovary; the free part consists of 5 triangular very acute segments. Petals large in proportion to the calyx, oblong-obovate (white) with a central brownish nerve, pinnated with lesser ones. Stamens 5, alternate with the petals, and shorter than they. Anthers nearly oval. Germen, or ovary, with its upper part free, hemispherical. Style short, much shorter than the stamens. Stigma capitate.

The figure of Sir James Smith, above quoted, represents the leaves larger than in our plant.

Fig. 1, 2. Flowers:—*magnified.*

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TAB. DXLI.

Azorella filamentosa. *Lam.*

Caulibus brevibus diffusis, ramis congestis, foliis lanceolatis subspathulatis concavis, petiolo folium æquante inferne dilatato longe ciliato, umbellis subsessilibus.

Azorella filamentosa. *Lam. Ill. t.* 489, *f.* 1. *Vahl. Symb.* 3, *p.* 47. *De Cand. Prodr.* 4, *p.* 77.

Azorella Chamitis. *Pers. Syn. Plant.* 1, *p.* 303. *D'Urville Fl. des Isles Malouines, in Mém. Soc. Linn. v.* 4. *p.* 614.

Bolax filamentosa. *Spreng. in Schult. Syst. Veget.* 6, *p.* 359.

Hab. Straits of Magellan. *Commerson. Capt. King.* Falkland Islands. *D'Urville.*

This is only one of several very curious, small, densely tufted, umbelliferous plants, which are peculiar to the temperate and cold climates of the southern hemisphere, and which at first sight are scarcely recognized as belonging to that family. In this the leaves are quite simple, concave, almost cymbiform, as Lamarck describes them, with a petiole equal in length with the leaf, and fringed with very long hairs. Umbels almost sessile, of several short rays, bearing flowers similar to those of the rest of the genus *Azorella.*

Fig. 1. Portion of a branch, with leaves. *f.* 2. Flower. *f.* 3. Fruit. *f.* 4. Fruit cut through transversely :—*magnified.*

Chas. Ferguson lith. Glasgow

TAB. DXLII.

Podocarpus ferruginea. *Don.*

Foliis distichis pectinatis lineari-falcatis coriaceis uninerviis, flore fœmineo solitario in apicem ramuli proprii multibracteati, fructu juniore ovato-attenuato, receptaculo carnoso nullo, drupa ovali-subsphærica magnitudine nucis avellanæ.

Podocarpus ferruginea. *Don, in Lamb. Pin. App. All. Cunn. in Ann. of N. Hist. v.* 1, *p.* 212.

Hab. New Zealand. Northern Island. *Bennett. Colenso. Dieffenbach. Edgerley. R. Cunningham.*

With justice this is named by Mr. Don *ferruginea*; for the dry specimens have a red-brown tinge, by which, as well as the broader and falcate leaves, it is at once distinguished from *P. spicata* (Tab. DXLIII.) which turns black in drying; and still more certainly by the solitary male catkins, and solitary female flower (never arranged in spikes) and large fruit, which is scarlet, and greedily devoured by wood-pigeons. The tree, it is said, attains a height of from forty to sixty feet, with a diameter of four feet in the stem. This is the *Miro* or *Mairi* of the natives. I have to regret a considerable degree of inaccuracy in the internal structure of the female flower and fruit, as here represented, which was not detected till too late to be corrected: Figs. 4 and 10 should therefore be considered as cancelled. In the former, especially, the descending ovule should be made to reach an opening at the margin near the base. But the precise structure of the flowers and fruit of this group of *Coniferæ* can only be really satisfactorily delineated from recent specimens.

Fig. 1. Male catkin. *f.* 2. Outer, and—*f.* 3. inner view of an anther. f. 2 *bis*, (upper right-hand figure) female flower on its bracteated branch or pedicel. *f.* 4. Section of the female flower (inaccurate). *f.* 5. Drupe, and—*f.* 6 and 7, the same laid open (*nat. size*). *f.* 8. Seed, the outer coat being removed (*nat. size*). *f.* 9. The nucleus. *f.* 10. Seed cut through vertically (inaccurate); all but *f.* 5-8 more or less *magnified.*

Allan & Ferguson lith. Glasgow

TAB. DXLIII.

PODOCARPUS SPICATA. *Br.*

Foliis undique insertis distichis linearibus obtusis uninerviis subtus siccitate plerumque glaucis, amentis masculis floribusque fœmineis spicatis, fructu juniore ovato-attenuato, receptaculo carnoso parvo squamæformi, drupa subrotunda magnitudine pisi sativi.

Podocarpus spicata. *Br. in Horsf. Plant. Javan. p.* 40.
Dacrydium taxifolium. *Banks and Soland. Lamb. Pin. Suppl.*
Dacrydium? Mai. *All. Cunn. in Ann. Nat. Hist. v.* 1, *p.* 213.

HAB. New Zealand. Northern Island. In forests, at some distance from the sea-coast. *All. Cunningham, R. Cunningham, Colenso, Bennett, Edgerley, Dieffenbach.*—*Mai* or *Metai* of the natives.

This noble tree is said by Mr. Allan Cunningham to attain a height of eighty feet, producing a durable wood, or red pines, dark as cedar, but brittle, and furnishing very indifferent spars.

The three New Zealand species of *Podocarpus* that are most nearly allied to each other, are *P. Totara* (figured in Lond. Journ. of Bot. v. 1, Tab. XIX.), *P. ferruginea* (see our preceding plate), and the present. But even without their fructification they may easily be recognized; the first having the largest, the broadest, almost lanceolate, and very acute foliage, drying to a very yellow hue. *P. ferruginea* has smaller, linear leaves, curved more or less like a sickle, pectinated by their very distichous direction, and turning reddish-brown in drying. Our *P. spicata* has narrower, straighter, very obtuse leaves, becoming almost black in desiccation, and generally glaucous beneath. The fructification is very peculiar; the male catkins and female flowers are all arranged on spikes of considerable length; in this respect, the female inflorescence approaching that of *Phyllocladus*. The drupes are much smaller than in the *P. ferruginea*, and I believe equally greedily devoured by birds.

Fig. 1. Female flower, or young fruit:—*magnified.* *f.* 2. Drupe, and—*f.* 3. the same laid open:—*nat. size.* *f.* 4. Drupe, the outer coat being removed. *f.* 5. The same laid open. *f.* 6. Male catkins. *f.* 7. Outer, and *f.* 8. inner view of *antheriferous scale*:—*magnified.*

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TAB. DXLIV.

Podocarpus? biformis.

Foliis undique insertis, aliis uncialibus laxis patentissimis seu reflexis linearibus acutiusculis supra planis dorso obscure carinatis, aliis minimis arctissime imbricatis ovato-rhombeis opacis obtusis medio affixis dorso superne præcipue carinatis.

Hab. New Zealand, probably the Southern Island. *Mr. Menzies: Herb. Banks and Hook.*

I have seen only two specimens of this very remarkable plant; the one, here figured, in which the upper or younger branches in general bear minute, short, and closely imbricated leaves; and that in the Banksian herbarium, in which the lower and older portions have that character, and the upper bear the large and spreading kind of foliage. These two sorts of leaves are so different, that if they grew on two separate plants, no one could suppose them to belong to one and the same species. In many Junipers, in *Dacrydium elatum*, and several allied genera, the leaves do vary remarkably in different stages of growth, but I know of none in which the two forms of leaf are so totally unlike each other, as in the present case. The plant resembles *Lycopodium Phlegmaria*, with its branched spikes of fructification. I regret that neither of the specimens offers any fructification; but the plant is too interesting to remain longer unpublished in our Herbaria.

Fig. 1. Upper, and—*f.* 2. Underside of one of the larger leaves. *f.* 3. Apex of a branch, with the smaller leaves. *f.* 4. Under side of a leaf, from the same:—*magnified.*

TABS. DXLV.—DXLVI.

Ourisia macrophylla. (Sect. Dichroma).

Repens, foliis longe petiolatis oblique cordatis crenatis, scapo (petiolisque hirsutis) diphyllo, foliis oppositis ovatis serratis sessilibus, umbella prolifera, involucro suboctophyllo, foliolis lanceolatis serratis, calyce obliquo corollaque hirsutis.

Hab. Mount Egmont, N. Zealand. *Dr. Dieffenbach.*

This is the first time* that any species of the genus *Ourisia* has been discovered in New Zealand. Mr. Brown detected the *O. integrifolia* in Van Diemen's Land; all the rest are natives of Chili, or the southern regions of S. America, with the exception of the *O. Nepalensis* of Mr. Bentham. From all those hitherto described, the present is at once distinguished by its large size and the umbellate flowers. It is found at a great elevation upon Mount Egmont, on the confines of perpetual snow; and there cannot be a question but that, if this and the other lofty mountains of N. Zealand were well explored, they would produce a rich harvest of novelty.

Fig. 1, 2. Flowers. *f.* 3. Corolla laid open. *f.* 4, 5. Anther. *f.* 6. Pistil. *f.* 7. Section of the germen. *f.* 8. Capsule bursting open:—*magnified.*

* A second and very different species of *Ourisia* will, however, soon appear in this work.

TAB. DXLVII.

Podocarpus? Dieffenbachii.

Foliis oppositis ovatis obtusis concavis crassis nitidis bi- seu quadrifariam imbricatis basi connatis vaginatis, junioribus margine villoso-lanatis.

Hab. Queen Charlotte Sound, New Zealand. *Dr. Dieffenbach.*

Of the genus of this I must remain in doubt, until some traveller in the less frequented districts shall have the good fortune again to find this tree, and to detect its fructification. The present is the only specimen that has been collected. Its leaves are very remarkable, always growing in exactly opposite pairs, connate and decurrent, so as to form a loose sheath around the stem of considerable length, and the stem is thus perfoliate; they are imbricated in four ranks on the older branches, generally in two on the younger ones.

The Coniferous trees of New Zealand are doubtless among the most valuable and interesting of the vegetable productions of that remote group of islands. They constitute the highly prized timber of the country; and I could not but wish, that several of the species should be more clearly defined, than has previously been the case, and figured. The present volume of the Icones, and the first volume of the London Journal of Botany, will now be found to contain figures of all the New Zealand Coniferæ which had not been represented before: and during the brief course of my investigation of the species, I have been enabled to add no less than three new ones to the catalogue of those already known. I shall here subjoin a list of the species, and references to the figures, by which it will be seen that there is only one (*Podocarpus dacrydioides*) that may not now be found in some well-known, or readily accessible British author:—

1. Dammara australis, *Lamb.* (*Cowrie* or (*Cordie*) *Lamb. Pin. ed.* 2, *tab.* 55. *Loud. Arboret. Brit. v.* 4, *p.* 2449. *f.* 2310. 2. Phyllocladus trichomanoides, *Don.* Tab. dxlix. dl. and dli. of the present volume. 3. Dacrydium cupressinum, *Sol. in Cook's 2nd Voy. v.* 1, *tab.* 51. *Lamb. Pin. tab.* 69. 4. Dacrydium Colensoi, *Hook.* Tab. dxlviii. of the present vol. 5. Podocarpus spicata, *Br.* Tab. dxliii. of the present volume. 6. Podocarpus ferruginea, *Don.* Tab. dxlii. of the present volume. 7. Podocarpus Totarra, *Don. Hook. in Lond. Journ. of Bot. v.* 1, *tab.* 19. 8. Podocarpus dacrydioides. *A. Rich.* (P. thujoides, *Br.* Dacrydium thujoides, *Banks and Sol. mst.* D. excelsum, *Don. Rich. Fl. Nov. Zel. tab.* 39). 9. Podocarpus? biformis, *Hook.* Tab. dxliv. of the present volume. 10. Podocarpus? Dieffenbachii, *Hook.* (the present plate.) 11. Thuja Doniana, *Hook. in Lond. Journ. of Bot. v.* 1, *tab.* 18.—No doubt, future researches in New Zealand will bring to light more novelties in this beautiful and important family of plants.

Fig. 1. Branch of Podocarpus? Dieffenbachii, *slightly magnified.* *f.* 2. Leaves, more *magnified.*

TAB. DXLVIII.

Dacrydium Colensoi.

Foliis in ramos vetustos undique, in ramulos quadrifariam, dense imbricatis nitidis minute resinoso-punctatis ovato-rhombeis obtusis dorso carinatis intus planiusculis medio affixis, drupa ovali umbonato.

Hab. High hills near the eastern coast of the Northern Island of New Zealand. *Wm. Colenso, Esq.* (n. 27); detected in 1841.

The very interesting account of the discovery of this new *Dacrydium*, for such I think it will be allowed to be, by Mr. Colenso, is given in the 1st vol. of the London Journal of Botany, p. 301. It is a tree 50 feet high, with a trunk 2½ feet in diameter, unquestionably of great rarity in the island; for Mr. Colenso was led to a very long and toilsome search for it, on hearing that it was so much prized by the natives, on account of its indestructible quality, that whenever one was found, it was reserved to make the coffin of a chief; and there is a tradition among the people, that one of their illustrious demi-gods, *Taue*, hid it on account of its great value. I am anxious that in the specific name it should commemorate its amiable discoverer, whose botanical researches in his adopted land, and his kindness and attention to botanists visiting the country, are beyond all praise; and, together with his still more valuable missionary labours, richly entitle him to be considered one of the greatest benefactors of New Zealand.

The bark of the trunk Mr. Colenso describes as deciduous, but not fibrous, as in the *Totarra*; here it is rather scaly and brittle, as in the *Dammara australis*. The foliage bears a considerable resemblance to the yet undescribed Huon Pine of Van Diemen's Land, of which the fructification is still unknown: but there are some discrepances in the only specimens we have hitherto seen of the latter:—and we must not conceal, that the leaves are very similar to the smaller foliage of our *Podocarpus? biformis*. There are, however, no traces of two forms of leaves in *P. Colensoi*.

Fig. 1. Ripe fruit. *f.* 2. Young fruit. *f.* 3. The same; the fleshy receptacle cut through. *f.* 4. The young fruit, as well as the receptacle, cut through. *f.* 5. Inner view of a leaf, with its point of attachment. *f.* 6. Outer view of ditto:—*magnified.*

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TABS. DXLIX.—DL.—DLI.

Phyllocladus trichomanoides. *Don.*

Foliis verticillatis pinnatis proliferis, foliolis oblique cuneatis coriaceis lobato-pinnatifidis penninerviis, lobis rotundatis truncatis dentatis, rachi alata.

Phyllocladus trichomanoides. *Don, in Lamb. Pin. ed.* 2, *App. Rich. Conif. p.* 23, *and* 129, *t.* 3. *All. Cunn. Bot. New Zeal., in Ann. Nat. Hist. v.* 1, *p.* 211.

Phyllocladus n. sp. *Don, in Lamb. Pin. App.*

Phyllocladus rhomboidalis. *A. Rich. in Voy. de l'Astrol. v.* 1, *p.* 363 (*excl. syn.*)

Hab. New Zealand; Northern Island. Banks of the Thames, Bay of Islands. Wangaroa, &c. *All. Cunningham. Mr. Colenso. Edgerley. Dieffenbach, &c.*

This is an extremely distinct species of *Phyllocladus*, from the original one of the elder Richard (*P. asplenioides*), a native of Van Diemen's Land: though by the younger Richard, and others, strangely confounded with it. It is called *Tauehaha* by the natives, and forms a tree of straight tapering growth, about sixty feet in height, with a trunk three feet in diameter. Its mode of growth is very peculiar. What I have here called pinnated leaves, are produced in whorls; but the rachis shoots out at the extremity, forms a branch, and produces another whorl of leaves at the extremity, which goes on increasing in a similar manner. The wood is close-grained, smelling strongly of turpentine, and is much valued for all kinds of outside work, while the bark is employed by the natives for dyeing a red colour.

The male and female flowers appear to be on different trees; or, perhaps, on different branches of the same tree. Male catkins cylindrical, on bracteated pedicels, clustered. Anthers sessile, densely imbricated, the lower ones acute, the upper ones acuminate, serrated at the point; all 2-celled, the cells opening laterally. The female flowers are in fleshy, toothed or serrated spikes or catkins: within each tooth or serrature of the rachis is a young urceolate fruit, open at the mouth: this rachis seems to develope itself into a pinnated leaf, as the fruit advances to maturity, as shown in our figures, Tab. dli.

Tabs. dxlix. dl. Ramified portion of a sterile plant, to show its mode of growth; *nat. size. Fig.* 1. Pinna of a leaf:—*magnified.*

(The references to the *flowers* and *fruit* will be given with Tab. dli.)

TAB. DLI.

PHYLLOCLADUS TRICHOMANOIDES. *Don.*

(See the preceding Description).

The present figure represents the flowers and fruit of the *Phyllocladus trichomanoides.*

Fig. 1. Branch, with male flowers; *nat. size.* *f.* 2. Male catkin. *f.* 3. Inner face of an anther, from the upper part of the catkin. *f.* 4. Outer face of an anther, from the lower part of the catkin; *magnified.* *f.* 5. Branch, with female flowers; *nat. size.* *f.* 6. Female spike. *f.* 7. Section of a portion of the rachis, showing two female flowers; one laid open. *f.* 8. Female flower more advanced; consisting of an urceolate covering, enclosing the young fruit. *f.* 9. The same laid open; *magnified.* *f.* 10. Branch, with mature fruit; *nat. size.* *f.* 11. Portion of the rachis, with a fruit protruding from its urceolate, thickened, fleshy covering. *f.* 12. The urceolate covering laid open to show the fruit, with its cup-shaped receptacle. *f.* 13. The receptacle and fruit, cut through vertically. *f.* 14. Entire fruit removed from the receptacle:—*magnified.*

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TAB. DLII.

Cassine Maurocenia. *Willd.*

Foliis subsessilibus coriaceis crassis lato-ellipticis ovatis subovatisve obtusis brevissime petiolatis marginibus revolutis, pedicellis axillaribus aggregatis petiolo longioribus, calycis foliolis fimbriatis, staminibus petalis dentatis triplo longioribus.

Cassine Maurocenia. *Linn. Sp. Pl. p.* 385. *Willd. Sp. Pl.* 1, *p.* 1493. *Ait. Hort. Kew. ed.* 2, *p.* 170. *Rœm. et Sch. Syst. Veget. v.* 6, *p.* 466. *Spreng. Syst. Veget. v.* 1, *p.* 939.

Maurocenia Frangularia. *Mill. Dict.*

Frangula sempervirens, &c. *Dill. Elth.* 146, *t.* 121, *f.* 147.

Hab. Cape of Good Hope. *Thunberg, Bowie, &c.*

There is a very good figure of this little-known plant in Dillenius' *Hort. Elthamensis*, it having been introduced to England from South Africa so early as 1690. It makes a handsome greenhouse shrub, 4-5 feet high; but I have never seen a living plant in this country, save that in the Royal Botanic Gardens of Kew. It is the "Great Hottentot Cherry" of South Africa.

Fig. 1. Flower. *f.* 2. Calyx and disk; the ovary cut through transversely. *f.* 3. Ovary on the disk. *f.* 4. Drupe; *nat. size.* *f.* 5. The same, cut through transversely. *f.* 6. The same, cut through vertically. *f.* 8. The seed laid open:—all but figure 4, *magnified.*

TAB. DLIII.

Lambertia ilicifolia. *Hook.*

Involucris 7-floris, foliolis interioribus perianthii apice pilosi tubum æquantibus, stylis pilosis, folliculis —?, foliis glabris obovatis cuspidatis basi attenuatis remote spinoso-dentatis subtus reticulatim venosis.

Hab. Swan River, Australia. *Mr. James Drummond.*

Of the genus *Lambertia*, 6 species have been described by Mr. Brown; all, except *L. formosa*, (which is from Port Jackson) are natives of the southern extremity of Australia. Dr. Lindley has published a 7th species, from Swan River, and I have now the pleasure to add an 8th, also from this latter settlement. The only specimen yet sent is that here represented, and it came in a letter. To this plant allusion is made, at page 398 of the 1st vol. of the "London Journal of Botany," where it is said: "This proves to be a new and very distinct species of *Lambertia*, of which a scrap had been sent in a letter, enough to identify the fact, and to gratify, in a very high degree, the late eminent Botanist whose name it bears, while on his dying-bed, and when he had scarce sufficient strength to hold the specimen in his hand."

Fig. 1. Flower. *f.* 2. Segment of the perianth, with its stamen. *f.* 3. Pistil:—*magnified.*

TAB. DLIV.

A. Heimia grandiflora. B. C. Heimia salicifolia.

It is not that the plants here represented are novelties, or even unfigured in books; but they are introduced for the sake of illustrating their specific distinctions, which appear to have escaped the notice of previous writers.

1. Heimia *grandiflora;* calycis dentibus omnibus patentissimis. Fig. Nostr. A.—Heimia salicifolia var. grandiflora; *Lindl. Bot. Reg.* 1841, *tab.* 60, (figure excellent) excluding the synonyms.

Hab. South Brazil; *Sellow, in Herb. Nostr.* Buenos Ayres, and Rio Jacquray, Prov. of Rio Grande; *Tweedie.* La Punta del Sauce, Province of Cordova. *Dr. Gillies.*

This is a truly beautiful plant, and I have never found the open character of the calyx to vary; it is alike spreading before and after inflorescence. Mr. Tweedie observes, from the large, spreading, yellow, sun-like flowers, it is called in Rio Grande, "*Abro Sol,*" and that it is used, strewed in the houses, to put away fleas, "of which there are plenty."

A. Portion of a flowering branch; *nat. size. Fig.* 1. Calyx (after flowering): *magnified.*

2. Heimia *salicifolia;* calycis dentibus interioribus post anthesin conniventi-clausis. Fig. nostr. B. C.

α. floribus majoribus, ovario apice subtrilobo, foliis lato-lanceolatis. Fig. nostr. B.—Heimia salicifolia. *Link et Otto, Ic. Pl. Berl. tab.* 28. *Sweet Brit. Fl. Gard. v.* 3, *t.* 390. Nesæa salicifolia. *H. B. K. Nov. Gen. et Sp. v.* 6, *p.* 192.

Hab. Mexico. Sides of the volcanic mountain of Jorullo; *Humboldt and Bonpland.* Oaxaca; *Andrieux,* (*in Herb. nostr.*) Texas; *Plotz.*

β. foliis angustioribus, floribus minoribus, ovario globoso. FIG. NOSTR. *C.*

Hab. Rio Jacquray; *Tweedie.*

This var. is scarcely deserving of notice but as a transition to the next.

γ. floribus multo minoribus, ovario globoso, foliis linearibus.
H. myrtifolia. *Cham. et Schlecht. in Linnæa,* 2, *p.* 347.

Hab. Tropical Brazil, and South Brazil; *Sellow.*

Messrs. Chamisso and Schlechtendal distinguish this species "floribus subsessilibus, capsula globosa:" and certainly the authentic native specimens possess peculiarly narrow leaves: but I find none of these characters are constant, and all these vars. have the closed segments of the calyx.

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TAB. DLV, DLVI.

Lobelia physaloides. *A. Cunn.*

Suffruticosa, glabra, caule anguloso-subramoso, foliis ovatis v. oblongo-ovatis duplicato-serratis longe petiolatis, racemis terminalibus subnutantibus, calycis laciniis linearibus integris corollæ $\frac{1}{4}$-longitudinem vix æquantibus, capsula globosa torulosa.

Lobelia physaloides. *A. Cunn. Bot. of N. Zeal. in Tayl. Ann. Nat. Hist. v. 2, p.* 50. *De Cand. Prodr. v.* 7. *Add. p.* 785.

Hab. In damp woods at Wangaroa, Matauri, &c. Bay of Islands, New Zealand. *A. and R. Cunningham. Mr. Colenso.*

" Planta (in horto) vix ad basin suffruticosa, 2-3-pedalis, ramulis rotundato-angulatis, purpureo-luridis. *Folia* alterna, ovata, acuta, valde prominenti-venosa, petiolata, 3-4 uncias longa, inæqualiter serrata, serraturis glanduloso-callosis, petiolis bi-uncialibus, supra canaliculatis basi incrassatis decurrentibus. *Racemi* divisi, 6-8-(multi-)flori. *Pedunculi* alterni, unciales, bracteis foliaceis linearibus suffulti. *Calycis* laciniæ lineari-lanceolatæ, subulatæ, acutæ, corolla plus duplo (triplove) breviores. *Corolla* cærulea, unciam (et ultra) longa, laciniis lanceolatis, attenuatis, lineatis, stamina æquantibus. *Antheræ* exsertæ, apice penicillatæ. *Stigma* dilatatum, bilobum, lobis rotundatis supra convexis glabriusculis, subtus concavis dense villosis (?)." *A. Cunn.*

Fig. 1, 2. Flowers :—*magnified.*

TAB. DLVII.

Myrtus bullata. *Sol.*

Foliis ovatis brevi-petiolatis acutis alte bullatis supra glabris subtus ramulisque pubescentibus, pedunculis axillaribus solitariis unifloris apice bibracteatis, calycibus 4-lobis petalisque rotundatis concavis extus verruculatis, bacca globosa verruculata lobis persistentibus coronata.

Hab. New Zealand, Northern Island. *Sir Joseph Banks, A. and R. Cunningham, Colenso, Dieffenbach, Dr. Sinclair, Edgerley.*

Apparently a common and extremely well-marked species of Myrtle, found in the Northern Island of New Zealand, at once distinguishable by its singularly blistered leaves, and its calyx and corolla covered externally with minute warts. Reduced as the genus *Myrtus* very properly now is, the present seems well to correspond with the marks given by De Candolle, as characteristic of it, in his "Mémoire sur la famille des Myrtacées;" a posthumous work, recently edited by his son. The seeds are arranged in double rows, in each of the two cells of the fruit.

Fig. 1. Flower, expanded. *f.* 2. Flower-bud, and calyx with pistil. *f.* 3. Section of ovary. *f.* 4. Fruit; *nat. size.* *f.* 5. The same, cut through transversely. *f.* 6. Seed. *f.* 7. Seed laid open. *f.* 8. Embryo:—all but figure 4, more or less *magnified.*

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TAB. DLVIII.

Quintinia serrata. *A. Cunn.*

Foliis lato-lanceolatis sinuato-serratis supra farinoso-squamatis subtus fusco-punctatis, racemis axillaribus multifloris folium æquantibus.

Quintinia serrata. *A. Cunn. in Tayl. Ann. Nat. Hist. v. 2, p.* 356.

Hab. New Zealand. Shores of the Bay of Islands. *A. Cunningham. Colenso.*

The genus *Quintinia* was founded by Alphonse De Candolle, on a plant of Sieber's, discovered in New Holland, and of which a figure of the flowers and immature fruit is given by Endlicher, in the Vol. of the "*Flora*" for 1832, page 389. With that genus our present plant seems to agree, except in having a 3-(not 5-)celled fruit.

Fig. 1. Flower; *magnified.* *f.* 2. Raceme of fruit; *nat. size.* *f.* 3. Calyx and pistil. *f.* 4. Transverse section of the ovary. *f.* 5. Fruit. *f.* 6. Vertical section of ditto. *f.* 7. Seed (scarcely mature) :—*magnified.*

Tab. VI. & VII.

TAB. DLIX.

Arthrotaxis cupressoides. *Don.*

Ramis (*cum foliis*) teretibus, foliis late rhombeo-ovatis obtusis appressis obtuse carinatis quadrifariam imbricatis, squamis antheriferis ellipticis obtusis longe stipitatis.

Arthrotaxis cupressoides. *Don, Trans. Linn. Soc. v.* 18, *p.* 173. *t.* 13, *f.* 2. (*excl. n.* 369, *of Mr. Gunn.*)

Hab. Launceston, Tasmania. *Mr. Gunn,* (*n.* 365) 1833.

One of the many fine and new plants which have been sent from Tasmania (as the inhabitants of Van Diemen's Land, correctly enough, wish their island to be called) by the excellent Ronald Gunn, Esq., and well described, and also figured, by the late Mr. Don. Our specimens, though not possessing perfect fruit, enable us to add a more perfect analysis than has yet appeared. Mr. Don's essential character of this genus will be given with our next plate.

Fig. 1. Leaf, seen from the underside. *f.* 2. Female amentum or strobilus. *f.* 3. Scale from the same, with its seeds. *f.* 4. Immature seed. *f.* 5. Male amentum. *f.* 6. The same, more advanced. *f.* 7, 8. Back and front view of the antheriferous scale :—more or less *magnified.*

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TAB. DLX.

Arthrotaxis tetragona. *Hook.*

Ramis (cum foliis) tetragonis, foliis ovatis obtusis appressis acute carinatis quadrifariam imbricatis, squamis antheriferis ovatis brevi-stipitatis.

Hab. Tasmania. *Mr. Gunn* (*n.* 369) 1833.

The following is Mr. Don's *Character essentialis* of the present genus: "*Amenta mascula* solitaria, multiflora, capitata, laxa. *Squamæ antheriferæ* longe unguiculatæ, subfastigiatæ. *Antherarum thecæ* 2, distantes, divaricato-patentes. *Semina* 2, v. 3, compressa, pendula, margine altero alato." Of the present plant, I have as yet only specimens with male amenta; but since they sufficiently accord with the original species of Mr. Don, and as it comes from the same country, I have ventured to consider it of the same genus. Specifically it is abundantly distinct, by its slenderer branches, and, taken in conjunction with the leaves, their 4-sided form.

Fig. 1. Male amentum. *f.* 2, 3. Upper and under view of an anther-scale. *f.* 4. Portion of a branch, with leaves. *f.* 5. Inner view of a leaf:—*magnified.*

TAB. DLXI.

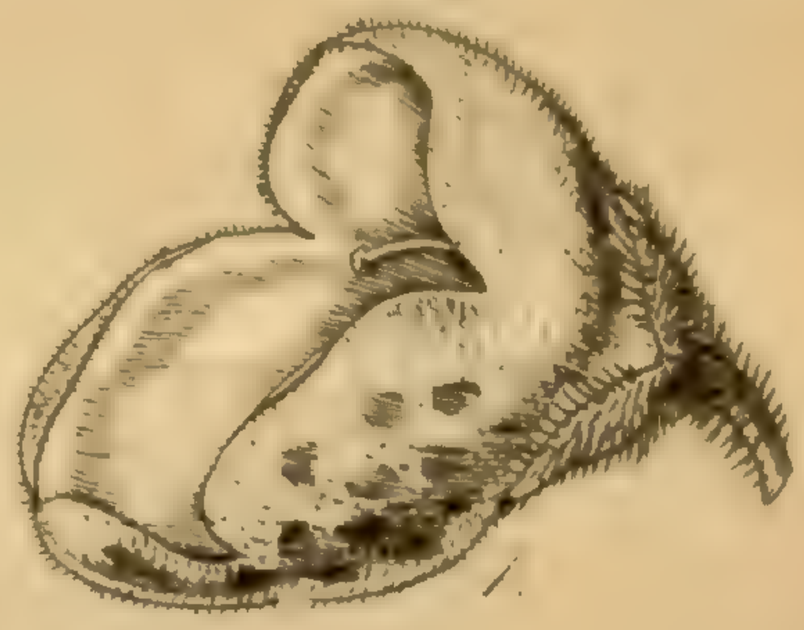
Calceolaria Sinclairii. *Hook.*

Caule erecto pubescente, foliis elliptico-ovatis grosse duplicato-serratis scabris petiolatis, paniculis terminalibus, corollæ pubescentis maculatæ labiis concavis superiore (minore) integro inferiore obtuse trilobo intus basi hirsutis.

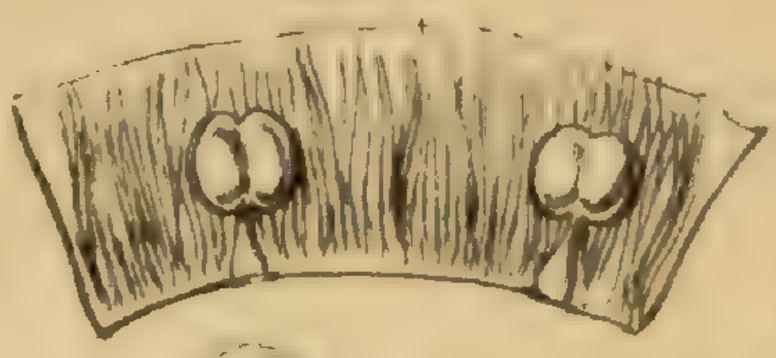
Hab. Waihaki, Northern Island of New Zealand. *Dr. Sinclair, R. N.* 1842.

Remote as is the situation of New Zealand from South America, there are some remarkable features which indicate an affinity in its vegetation with that of the latter country. This is shown by the existence of *Drimys* and *Fuchsia*, genera otherwise peculiar to the great South American continent. And now, thanks to our friend Dr. Sinclair, a species of *Calceolaria* has been detected, of which I here give the figure. It is a tall growing plant, found in bushy places in considerable plenty about Waihaki. The corolla has both its lips concave, and so far expanded as to approach that of *Jovellana*. It may indeed be considered a connecting link between the two genera.

Fig. 1. Flower. *f.* 2. Inner base of the corolla, with stamens. *f.* 3. Pistil. *f.* 4. Capsules; *nat. size*. *f.* 5. Single capsule. *f.* 6. The same, cut through transversely:—all but figure 4, more or less *magnified*.



2.



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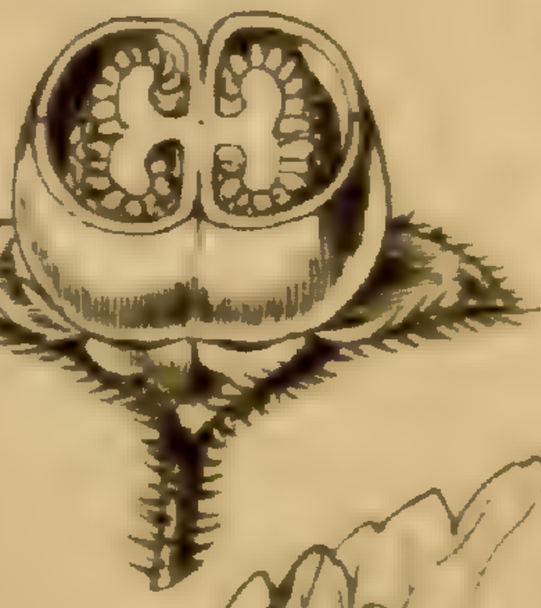
6.



4.

Mac. & Ferguson sculp. Glasgow

TAB. DLXII.

Quercus Lusitanica. *Lam.*

(Gall-nut Oak).

Foliis ovatis aut ovato-lanceolatis coriaceis luridis subtus pallidis junioribus tomentosis margine undulato-serratis dentibus acutis aut crenatis basi rotundatis aut cordatis, cupulæ subsessilis squamis adpressis lanatis subciliatis, glande conica aut cylindraceo-elongata. *Webb.*

Q. Lusitanica, *Lam.*—*Webb, It. Hisp. p.* 11. Q. faginea, *Lam.*—Q. Valentina, *Cav. Ic.* 2. *p.* 25, *t.* 129. Q. australis, *Link.* Q. hybrida, *Brot.* Q. infectoria, *Olivier.* Q. Turneri and Q. Canariensis, *Willd.*

Hab. From N. lat. 41° and 42° in Spain and Portugal, to the Valley of Domoùz Derèh, N. of Constantinople in the East, and as far South as Syria. *Webb.*

Few plants require illustration by figures more than the Oaks of the south of Europe. Mr. Webb's "Iter Hispaniense" contains most valuable remarks on those of Spain and Portugal; and it is through them I am able to determine the present species, of which the specimen was kindly sent to me by G. H. Ward, Esq., of Northwood Park, Isle of Wight, taken from a fine young tree which that gentleman raised from acorns of the south of Spain. It entirely accords with the *Q. Lusitanica* of Lamarck, of which Mr. Webb says: "It has been the fate of this remarkable tree to have been overlooked for more than two hundred years after the time of Clusius, and then to have been almost simultaneously re-discovered and described under a multitude of names (as given above) by various authors. This, too, is the more singular as regarding a tree which produces an object of primary importance, namely, the *gall-nuts* of commerce. Clusius, indeed, remarks: "Galli autem extremis ramulis nascuntur, iis quæ in officinis venales reperiuntur, perquam similes;" and in fact, when compared with the *Quercus infectoria*, both as originally collected by Olivier, and as found by Labillardière in Syria, and by myself and M. Parolini in Phrygia, the Spanish turns out to be identical with the Levant species, whose product is so universally employed."

Fig. 1. Upper scale from the base of the acorn-cup. *f.* 2. Scale from the base of the cup:—*magnified.*

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TAB. DLXIII.

Santalum Mida, β. *Hook.*

Foliis alternis lanceolatis subsessilibus, racemis axillaribus terminalibusque folio multoties brevioribus, floribus pentameris (nunc tetrameris) squamis cum staminibus alternantibus parvis, iis stam. oppositis majusculis longe piloso-fimbriatis.

α. foliis angusto-lanceolatis. Mida salicifolia. *A. Cunn. Fl. N. Zeal. in Ann. of Nat. Hist. v.* 1, *p.* 376.—(*Vid.* Tab. nostr. dlxxv.)

β. foliis lanceolatis. Mida eucalyptoides. *A. Cunn. l. c. p.* 376.—Tab. nostr. dlxiii.

γ. foliis lato-lanceolatis ovalibusve. M. myrtifolia. *A. Cunn. l. c. p.* 377.

Hab. Northern Island of New Zealand, especially about the Bay of Islands. *A. and R. Cunningham. Mr. Colenso* (*n.* 31) in dense woods. *Edgerley.*

Upon this plant, and others which appear to me to be slight varieties, merely differing in the greater or lesser breadth of the leaves, and called "*Mida*" by the natives, Mr. A. Cunningham has founded his genus "Mida (Thesium,* *Linn.*")" About the same time that Mr. Cunningham published his character in the Annals of Nat. Hist., Endlicher described it from specimens received from the author, in his "Genera Plantarum." The descriptions differ slightly from each other, and both from what I have myself observed, and which has led me, without any hesitation, to refer it to *Santalum*, with which it seems to agree in habit and in every essential point. Mr. Cunningham says, "Discus epigynus nullus; Stam. 5, extus fasciculo gracili villorum munita." But I find 5 small, broad, rounded scales at the mouth of the perianth, which may, I think, be considered the lobed margin of an hypogynous disk, with which the whole tube of the perianth is lined; and the "fascicle of hairs" arises from a distinct scale inserted at the back of the anther, exactly as in *Santalum*. (See *S. album* in Nouv. Dict. des Sc. Nat. cum Ic. et *S. Freycinetianum*, Gaud. et Freyc. Voy. t. 45.) Endlicher observed 4 stamens and 4 lobes to the calyx, which latter he correctly describes as deciduous. He speaks of 2 series of glands, but calls those between the stamens the exterior, which appear to me interior.

Fig. 1, 2. Flowers. *f.* 3. The same laid open. *f.* 4. Ovary laid open. *f.* 5. Mature fruits (*nat. size.*) *f.* 6. Single fruit. *f.* 7. The same, cut through vertically. *f.* 8. The same, cut through transversely. All but figure 5 more or less *magnified.*

* I do not know from this whether Mr. Cunningham considers that the plant has been called *Thesium* by Linnæus, of which there is no evidence that I am aware of, or that any species of the Linnæan *Thesium* are to be referred to it.

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TAB. DLXIV.

Carpodetus serratus. *Forst.*

Carpodetus *serratus*. *Forst. Gen. t.* 17. *De Cand. Prodr.* 2, *p.* 29. *A. Cunn. Fl. N. Zeal. in Ann. Nat. Hist. v.* 3, *p.* 247.

Hab. N. Zealand. Middle Island. *Forster*. On the alluvial banks of rivers, occasionally in salt-water marshes, Wangarei, &c.; Northern Island:—called "*Piri-piri-water*" by the natives. *A. Cunningham*. *Mr. Colenso* (*n.* 33).

Arbor 10-20-pedalis, (*A. Cunn.*) *Folia* biuncialia, alterna, ovata, coriaceo-membranacea, opaca, subglanduloso-dentata, acuta, supra puberula, subtus pallidiora, basi in petiolum semilineam longum attenuata. *Flores* corymbosi, corymbis pedunculatis folio brevioribus; ramis pedicellisque minutè bracteolatis. *Calyx* parvus, semisuperus, pubescens: tubo brevissimo pateriformi, limbo 5-dentato, dentibus erectis, deciduis. *Corolla* 5-petala, ovato-lanceolata, extus pubescens, patens. *Stamina* cum petalis alternantia. *Filamenta* erecta, petalis breviora. *Antheræ* ovato-rotundatæ, biloculares. *Ovarium* turbinatum, a vertice depressum, plusquam semi-inferum, 5-loculare, pluri-ovulatum, ovulis podospermo elongato, e loculi summitate, angulo interiore pendentibus. *Stylus* filiformis, longitudine filamentorum. *Stigma* capitatum. *Capsula* (vix matura) subglobosa, supra medium e lapsu loborum calycinorum quasi zonata. *Loculi* et *semina* immatura ut in ovario.

De Candolle referred this plant to *Rhamneæ*; but the stamens are certainly alternate with the petals, and if *Celastrineæ* be allowed to have a nearly inferior ovary and seeds suspended from the upper and inner angle of the cells, it may be safely placed in that Order. Mr. Colenso observes, that the flowers are white, and the leaves generally variegated and clouded with yellow, which disappears in the dried specimens.

Fig. 1, 2. Flowers. *f.* 3. Section of the ovary. *f.* 4. Nearly mature capsules; *nat. size.* *f.* 5. Single capsule. *f.* 6. The same, cut through vertically. *f.* 7. The same, cut through transversely. *f.* 8. Scarcely mature seed, with its podosperm: —all but figure 4 more or less *magnified.*

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TABS. DLXV.—DLXVI.

Hoheria populnea. *A. Cunn.*

Hoheria populnea. *A. Cunn. Fl. Nov. Zeal. in Ann. Nat. Hist. v.* 3, *p.* 319.
Sida Hoheri. *Hook. mst.*

Hab. New Zealand, Northern Island. Banks of rivers and skirts of forests, Bay of Islands. *Fraser*, 1825. *R. Cunningham*, 1833. *Mr. Colenso. Edgerley.* "*Hoheri*" of the natives.

My first knowledge of this fine and large growing shrub was from specimens sent to me by Mr. Fraser in the year above-mentioned; and these I had no hesitation in referring to *Sida*, in *Malvaceæ*. The accurate Mr. Allan Cunningham, however, was of a different opinion, and has constituted of it a new genus, *Hoheria*, which he places in *Bombaceæ*, rather than *Malvaceæ*, but with some degree of doubt. It is true I am not more fortunate than Mr. Cunningham in possessing the mature fruit; but so far as can be judged from the ovary and ovules, there is nothing to militate against its being a *Sida*. Its habit, indeed, is peculiar, and the deeply serrated, and almost spinulose leaves, are remarkable. It may form a section of *Sida*, to which the name *Hoheria* may be given. In the meantime, I retain the name *Hoheria*, and give the figure as illustrative of the plant.

Fig. 1. Unexpanded flower. *f.* 2. Expanded flower. *f.* 3. Section of the calyx, including the pistil. *f.* 4. Free portion of the staminiferous column. *f.* 5. Vertical section of the ovary. *f.* 6. Transverse section of ditto:—*magnified.*

TAB. DLXVII.

Mazus pumilio. *Br.* (?)

Corollæ labio superiore profunde bifido, scapis 1-4-floris calycibusque glabris. *Br.*

Mazus pumilio. *Br. Prodr. Fl. Nov. Holl. p.* 439. *Endl. Iconogr. Gen. Pl. t.* 102.

Ourisia sp. *Hook. supra*, Tab. dxlv.-dxlvi. (*note.*)

Hab. Tasmania. *R. Brown, Esq.* At the foot of dry, clayey cliffs, near Matapouri, on the east coast of the northern island of N. Zealand, Dec. 1837, and again in March, 1841. *Mr. Colenso* (*n.* 71).

This pretty little plant did not escape the notice of Mr. Colenso, who found it in no other localities save those above-mentioned, and recognised it as something quite new to New Zealand. I had no means, from the paucity of specimens, of examining minutely into the structure of the flower, without destruction to the specimens, and, in the note above referred to, I too hastily pronounced it to be an *Ourisia*. Mr. Bentham, however, whose judgment in this matter stands deservedly high, at once recognised it as most likely belonging to the genus *Mazus:* and upon comparing it with Mr. Brown's description of his *Mazus pumilio* of Van Diemen's Land, I am inclined to believe it to be the same species. He makes two varieties:—"α. racemus 3-4-florus, pedunculis juxta apicem bracteola setacea.—β. scapus uniflorus." One of our specimens is still more luxuriant than the var. α.

Adam & Ferguson lith. Glasgow

TAB. DLXVIII.

Phebalium nudum. *Hook.*

Ramis erectis virgatis, foliis subsessilibus oblongis obtusis glabris nudis subserratis supra præcipue glanduloso-punctatis, corymbis terminalibus multifloris, calyce minuto 5-dentato, petalis lanceolatis, staminibus glabris petala duplo fere superantibus, ovario glabro.

Hab. New Zealand; Owae, on the east coast of the northern island. *Mr. Colenso*, 1838 (*n.* 56). Hokianga. *Edgerley.*

I have here again the pleasure of figuring another genus, recently added to the Flora of New Zealand; first detected by Mr. Colenso, and soon after by Mr. Edgerley. Most of the species of *Phebalium* are remarkable for the dense tomentum with which almost the whole plant is covered, or more frequently a silvery scurf. Our *P. montanum*,* and some others in our Herbarium, from New Holland and Van Diemen's Land, are an exception and they have terete leaves. The present, however, possesses the broad foliage, and quite the habit of our *P. retusum* (supra, vol. 1, t. 57) and the leaves quite free from any adventitious covering, and in other respects is also very different from any known species of the genus. It forms a tall, very graceful shrub, or small tree, as Mr. Colenso describes it, 12-16 feet high, known to the natives by the name of "*Mairehau*." Specimens were forwarded by Mr. Colenso to Mr. Allan Cunningham, soon after they were gathered; but he did not live to examine them, and to share in the pleasure such a discovery could not fail to have afforded him.

Fig. 1. Portion of a leaf. *f.* 2. Flower. *f.* 3. The same, with the corolla more expanded. *f.* 4. Pistil. *f.* 5. Section of the ovary:—*magnified.*

* *Icones Plant.* v. 1, *t.* 59.

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TAB. DLXIX.

Metrosideros diffusa. *Sm.*

Ramulis radicantibus, foliis elliptico-ovatis coriaceis glabris acuminatis venosis supra nitidis subtus nigro-punctulatis, paniculis axillaribus terminalibusque foliis longioribus, ramulis oppositis pedicellisque pilosis, calycibus floriferis turbinatis, tubo semisupero fructifero urceolato, limbo 5-lobo persistente.

Metrosideros diffusa. *Sm. in Linn. Trans. v.* 3, *p.* 268. *De Cand. Prodr.* 3, *p.* 224.

Melaleuca lurida. *Linn. fil. Suppl. p.* 3122. (*non Forst.*)

Hab. New Zealand. Northern Island. *Sir Joseph Banks*, 1769. Dense forests at Wangaroa, adhering to the trunks of the largest timber-trees. *A. Cunningham.* Hokianga. *Edgerley.*

At the time the accompanying figure was made, I did not possess a flowering specimen, which has been since kindly given to me by Mr. Heward, the possessor of Mr. Allan Cunningham's valuable authenticated collections. In the flowering state, the calyx is turbinate, the lower half of the tube incorporated with the germen and the narrowest, the upper, free portion, is dilated and campanulate; the limb of 5 small, rounded lobes: the petals yellowish, thrice as long as the calycine lobes, very concave, and unguiculate: the stamens yellow, four times as long as the petals, and a little longer than the style. In the state of the fruit, the calyx becomes much altered in shape; it is urceolate, the lower portion incorporated with the capsule, much enlarged, globose, 3-lobed, surmounted by the narrow, tubular neck, and the 5 persistent spreading lobes. The capsule is 3-celled, and, together with the calyx, splits into three deep valves, bearing the dissepiments in the centre of the valves. At the base of the inner angle of each cell, is a rounded receptacle, covered with erect clavate seeds, which fill the cavities of the cells.

Fig. 1. Mature fruit, entire. *f.* 2. The same, beginning to burst. *f.* 3. The same, burst quite open, many of the seeds removed. *f.* 4. Section of the capsule; the seeds removed. *f.* 5. Immature seed:—*magnified.*

Tab. DLXIX.

TAB. DLXX.

ALECTRYON EXCELSUM. *DC.*

GEN. CHAR. *Cal.* 5-lobus, æstivatione imbricata. *Pet.* 0. *Stam.* 7-8, hypogyna, æqualia, erecta. *Antheræ* biloculares, filamentorum longitudine. *Ovarium* ovato-obliquum, 1-(3 *A. C.*)-loculare, dorso crista erecta alatum, et hinc stylus subalatus lateraliter evadit. *Stigma* simplex (3-fidum *A. C.*) "*Bacca* sicca ab ortu 1-locularis margine aut apice alata. *Semen* exalbuminosum, arillo incompleto cinctum, basi loculi affixum, erectum. *Cotyledones* spiraliter convolutæ, et radicula deorsum spectans." (*A. C.*)

Alectryon excelsum. *Gærtn. Fruct. v.* 1, *p.* 216, *t.* 46. *De Cand. Prodr. v.* 1, *p.* 616. *All. Cunn. Fl. Nov. Zel. in Tayl. Ann. Nat. Hist. v.* 3, *p.* 318.

Euonymoides excelsa. *Sol. mst. in Herb. Banks.*

HAB. N. Zealand, Northern Island. *Sir Joseph Banks*, 1769. Banks of rivers and harbours, frequently within range of the tide. Wangaroa, &c. *A. and R. Cunningham.* Bay of Islands. *Dr. Dieffenbach. Mr. Colenso.* "*Tetohi*" of the natives.

Folia alterne pinnata cum impari, foliolis petiolulatis oblongo-ovatis, acuminatis, integerrimis, subtus pubescentibus. *Paniculæ* axillares terminalesque. *Flores* parvi. *Stamina* intense rubra.

The ripe fruit of this rare and little known genus I have not seen; but to judge from a drawing made on the spot, and given me by Dr. Dieffenbach, its shape is very similar to the more advanced ovaries, represented at our figure 3: this capsule bursts on one side, and a black, round, shining seed is protruded, enveloped in a very large scarlet fleshy arillus, whence, in conjunction with the crested fruit, arises the generic name ἀλεκτρων, a *cock.*

Fig. 1, 2. Flowers. *f.* 3. Branch of the panicle, with immature fruits. *f.* 4. Single fruit from ditto. *f.* 5. The same laid open. *f.* 6. Section of an immature seed:—*magnified.*

Tab. DLXX.

TABS. DLXXI, DLXXII.

Ranunculus nivicola. *Hook.*

Caulescens, pilis longis hirsutus, foliis radicalibus longissime petiolatis reniformi-cordatis profunde 3-5-lobis, lobis lato-cuneatis inciso-crenatis, caulinis perpaucis breviter petiolatis, summis sessilibus linearibus v. 3-multifidis laciniis angustis, panicula terminali, sepalis 5 lato-lanceolatis appressis, petalis 12-15 cuneatis lineatis retusis, fructus capitulis ovato-globosis, stylis ovarium subæquantibus subulatis apice uncinatis.

Hab. On Mount Egmont, in the Northern Island of New Zealand, at the limit of perpetual snow. *Dr. Dieffenbach.*

This is one of the noblest of all the species of *Ranunculus* yet known to us, 2 or 3 feet high, with leaves 4 and 5 inches in diameter, and flowers that a half-crown piece will scarcely cover. In habit, it a good deal resembles the fine *R. cortusæfolius* of Teneriffe, and *R. Creticus* of Crete and Northern Africa; but the flowers and fruit are totally different, and the numerous petals exhibit an affinity with several South American species. The locality is no less interesting than the plant itself, being the limits of perpetual snow, on Mount Egmont, which limit Dr. Dieffenbach estimates at 7204 feet above the level of the sea, and the whole height of the mountain at 8839 feet.

Fig. 1. Immature carpel :—*magnified.*

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TAB. DLXXIII.

Arthrotaxis laxifolia. *Hook.*

Ramis (cum foliis) subteretibus, foliis subquadrifariis laxis erecto-incurvatis ovato-lanceolatis acutis dorso convexis carinatis intus concavis.

Hab. Tasmania, *Ronald Gunn, Esq.* 1833 (*n.* 369.)

Of both the kinds of fructification of this plant, I am ignorant: indeed, I possess only the solitary specimen here represented, and which appears to hold an intermediate rank between the *A. cupressoides, Don,* (Tab. nostr. dlix.) and the following species, *A. selaginoides.* To the former Mr. Don refers it; that is, if the specimen, *n.* 369, which he examined in Dr. Lindley's Herbarium, from Mr. Gunn, be the same as mine, which I have reason to suppose it is: but to me they appear quite different species. It behoves a botanist, however, to speak with caution when treating of a family of plants whose leaves are peculiarly liable to variation in the different stages of their growth.

Fig. 1. Portion of a branch, with leaves. *f.* 2. Inner face of a leaf. *f.* 3. Outer face of a leaf:—*magnified.*

TAB. DLXXIV.

Arthrotaxis selaginoides. *Don.*

Ramis (cum foliis) teretibus crassis, foliis undique imbricatis laxiusculis erectis incurvatis lanceolatis acuminatis dorso carinatis intus canaliculatis, squamis antheriferis acutis longe stipitatis.

Arthrotaxis selaginoides. *Don, Linn. Trans. v.* 18. *p.* 172.

Hab. Mountains of Tasmania, near Launceston. *Ronald Gunn, Esq.* 1833. (*n.* 368.)

I regret that my notes on the *Coniferæ* of Tasmania, sent me by Mr. Gunn, if they ever reached my hands, have been mislaid, so that I am quite unable to give any of the remarks of that gentleman, which are frequently both full and valuable as accompanying his highly prized specimens. I cannot even state the size of the trees, nor their exact locality. The present species of *Arthrotaxis*, as will be at once seen, comes near the *A. cupressoides* (Tab. dlix.), and is from the same country. It differs in the much stouter stems and branches, the differently shaped leaves, their dissimilar arrangement, the larger cones, and the acutely pointed anther-scales.

Fig. 1. Leaf, seen from the under side. *f.* 2. Male amentum. *f.* 3. The same, with several of the anther-scales removed. *f.* 4. 5. Anther-scales. *f.* 6. Inner view of a scale from the nearly ripened cone. *f.* 7. 8. Seeds :—*magnified.*

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TAB. DLXXV.

Santalum Mida. *Hook.*

(*See the description at* Tab. dlxiii.)

The accompanying figure of the *Mida salicifolia*, of A. Cunningham, was prepared under an impression that it was one of three species of *Mida* as described by that author. A subsequent examination, however, brought me to a different conclusion, and led me to consider the three supposed species of *Mida* to be in reality varieties of one kind of *Santalum*, as detailed in the above description. It will be here seen that the stigmas vary from 3 to 4, and that the pedicels are more thickened than those given in our Tab. dlxiii. This latter circumstance, however, I take to be no specific difference, but rather a sexual state, and indeed, the flowers of the present specimen appear to be abortive.

Fig. 1. Flower. *f.* 2. Flower, more expanded and laid open. *f.* 3. Abortive (?) ovary and calyx-tube, the lobes of the calyx being removed. *f.* 4. The same cut through vertically:— *magnified.*

1.

TAB. DLXXVI.

Drimys axillaris. *Forst.*

Foliis oblongo-obovatis supra viridibus subtus glaucis, pedunculis axillaribus fasciculatis unifloris petiolo paululum longioribus, floribus parvis, petalis 6 biserialibus 3 int. minoribus.

Drimys axillaris. *Forst. Gen. t.* 42. *De Cand. Prodr.* 1, *p.* 78. *Rich. Fl. Nov. Zel. p.* 290. *A. Cunn. in Ann. Nat. Hist.* 4, *p.* 257. Wintera axillaris. *Forst. Prodr. n.* 229. *Willd. Sp. Pl.* 2, *p.* 1240.

Hab. New Zealand, Northern Island. *Sir Jos. Banks,* 1769. Damp shady forests on the Kaua-Kaua and Hokianga rivers. *A. and R. Cunningham, Mr. Colenso.*

" Arbor 30-pedalis, superne foliosa, trunco 5 unc. diametro, declinato, flexuoso." (*Colenso.*) Rami ramulique atro-purpurei, glabri. Folia alterna, petiolata, 3-4 uncias longa, unciam sesqui-unciam lata, elliptica, vel obovato-elliptica, integerrima, coriaceo-membranacea, penninervia, minute reticulata, glabra, supra viridia subtus glauca. Petiolus 3-4 lineas longus. Pedunculi simplices, uniflori, axillares, fasciculati, pedunculo parum longiores, ebracteati. Flores parvi. Calyx primum integer, demum in 2, plerumque 3, lobos rotundatos irregulariter dehiscens. Petala sex, patentia, quorum 3 exteriora majora, obovata, extus puberula: int. minora oblonga. Stamina 10-12, erecta. Filamenta brevia, superne incrassata. Antheræ e loculis duobus parallelis adnatis, vertice dehiscentibus. Ovaria 3-4, obovata, apice depressa; stigma sessile.

St. Hilaire, in his " Plantes usuelles du Brésil," has shown that there is no sectional difference between *D. axillaris* and the South American species as suggested by De Candolle, the general structure of the calyx being the same in both. The flowers, however, of our plant are remarkable for their small size, and the small number of petals.

Fig. 1. Flower, scarcely expanded. *f.* 2. 3. Upper and under view of an expanded flower. *f.* 4. 5. Stamens. *f.* 6. Ovaries: —*magnified.*

TAB. DLXXVII, DLXXVIII.

Ixerba brexioides. *A. Cunn.*

Gen Char. Cal. inferus, coriaceus, 5-phyllus, æstivatione imbricata, decidua. *Petala* 5, membranacea, hypogyna, unguiculata sub disco hypogyno, decidua, æstivatione imbricata. *Stamina* hypogyna, cum petalis alterna, eodem loco inserta. *Filamenta* subulata. *Antheræ* ovato-acuminatæ, versatiles, biloculares, loculis basi divaricatis, introrsum longitudinaliter dehiscentibus. *Discus* hypogynus, 5-lobus, planiusculus, cum ovarii basi connatus, lobis retusis, petalis oppositis. *Ovarium* superum, conico-globosum, subquinquelobum, 5-loculare, (loculis biovulatis, ovulis collateralibus, suspensis), in stylo subulato 5-sulcato attenuatum. *Stigma* acutum. *Capsula* (fere pentacocca), subglobosa, una cum stylo persistente, in valvis 5 loculicido-dehiscens, valvarum lateribus magis minusve reflexis, apicibus (seu styli laciniis) bipartitis. *Loculi* 5, singulo dispermo, ovulo unico plerumque abortivo. *Semina* majuscula elliptica, glabra, nitida, pallide fusca, ad hilum longe carunculata, angulo interiore loculi affixa, pendentia. *Abumen* carnosum vix copiosum. *Embryo* recta. *Cotyledones* magnæ, hemisphericæ. *Radicula* ad hilum seminis.—Arbor 25-30-*pedalis* (Colenso); *ramis teretibus, rugosis, fuscis.* Folia *inferiora, ut videtur, opposita, superiora verticillata terna, exstipulata, coriacea, elongato-lanceolata basi attenuata brevi-petiolata, grosse serrata, supra nitida reticulatim venosa, subtus pallida opaca, venis obsoletis.* Umbellæ *terminales, sessiles; radiis trifidis.* Pedicelli *sulcati, sursum incrassati.* Flores *majusculi, albi.*

Ixerba *brexioides. A. Cunn. Bot. of N. Zeal. in Ann. of Nat. Hist. v.* 3, *p.* 249.

Hab. N. Zealand, Northern Island. Skirts of woods, Wangaroa. *A. Cunningham*, 1882. Wairua*. *Mr. Colenso.* 1840.

One of the most remarkable, and perhaps the rarest of the many interesting plants of N. Zealand. Mr. Cunningham was ignorant of its fruit; but Mr. Colenso had the good fortune to discover the plant in that state in March, 1840, and from his specimens our figure is taken. In general habit and in the structure of the flowers, there is assuredly a very great affinity, as Mr. Cunningham observed, with *Brexia*; but I have no means of comparing it with the fruit of the latter, which is said to be "a berry with 5 cells, and the seeds attached in a triple row to the centre in each cell." With *Roussea* too, the flowers in many points agree; but in that genus the anthers are extrorse, and the structure of the ovary seems considerably different.

Fig. 1, 2. Flowers. *f.* 3, 4. Anthers: *magnified.* *f.* 5. Mature fruit. *f.* 6. Seed: *natural size.* *f.* 7. The fruit beginning to burst open. *f.* 8. Capsule, (or in reality 5 cocci) quite burst and exhibiting the seeds. *f.* 9. Seed: *magnified.*

* So spelt by Mr. Colenso. It may be the same with Wangaroa of Mr. Cunningham.

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TAB. DLXXIX.

Triglochin filifolium. *n. sp.*

Repens, foliis fasciculatis filiformibus scapum subæquantibus, fasciculis basi vaginatis, racemo elongato, sepalis ext. rotundatis int. ellipticis, stigmatibus acutis, capsula subglobosa triloba, loculis 3 seminiferis.

Hab. New Zealand, Northern Island. Alluvial banks, head of Waikare River, Bay of Islands. *Mr. Colenso.* (*n.* 94).

Among the most minute of the genus, and very distinct in its peculiarly slender filiform leaves, globose capsule, and, so far as can be seen in the dry state, in the stigmas being always acute, not penicilliform.

Fig. 1. Flower or immature fruit. *f.* 2. Fully formed fruit. *f.* 3. One of the lobes or cells :—*magnified.*

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TAB. DLXXX.

Veronica tetragona. *n. sp.*

Fruticosa subdichotome ramosa, humilis, foliis arcte 4-fariam imbricatis ovatis obtusis carinatis superioribus basi lanosis. floribus 2-3 in apicibus ramulorum sessilibus, calycibus 4-partitis laciniis oblongis rigidis ciliatis, corollæ tubo elongato, limbi lacinia sup. bifida.

Hab. N. Zealand, Northern Island. Near perpetual snow, on the summit of Tongariro, a high and volcanic mountain in the middle of the island, gathered with many other novelties existing there, by a gentleman who visited the Church of England missionary station about three days' journey from the mountain, and who gave them to Mr. Colenso. (*n.* 63).

A singular and very distinct species of *Veronica*, of which genus no doubt other remarkable kinds will be found in N. Zealand, when the elevated mountains are more searched. Without the flowers this plant might almost be taken for *Andromeda tetragona*.

Fig. 1. Apex of a flowering branch. *f.* 2. Leaf. *f.* 3. Flower. *f.* 4. Calyx and pistil :—*magnified.*

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TAB. DLXXXI.

Angelica? rosæfolia. *n. sp.*

Suffruticosa, ramis tortuosis elongatis, foliis pinnatis pinnis oppositis subtrijugis cum impari oblique ovatis acutis acute serratis basi biglandulosis, inferioribus uno alterove raro compositis, vaginis auriculatis, umbellæ involucro universali partialique laciniato, stylis elongatis persistentibus erectis, fructu cordato-ovato.

β. foliis trifoliolatis, foliolis angustioribus.

Hab. New Zealand (probably near the Bay of Islands), *Mr. Colenso*.—β. East Cape, Northern Island, *Dr. Sinclair*.

This is a very peculiar-looking umbelliferous plant, with perennial and apparently almost woody stems, deeply striated and marked below with the sheathing bases of former years' leaves. The leaves and leaflets very much resemble, at first sight, those of a rose: and when held up between the eye and the light, they are seen to be closely and beautifully reticulated with pellucid veins. The fruit seems exactly that of an *Angelica*, but the styles are singularly long and straight.

A variety of this, as I am disposed to consider it, with the same fruit, a similar structure of leaves, and corresponding small glands at the base of the leaflets, but with these leaflets only 3 on each leaf, and narrow, is found by Dr. Sinclair at East Cape.

Fig. 1. Flower unexpanded. *f.* 2. Fully expanded flower. *f.* 3. Petal. *f.* 4. Fruit. *f.* 5. Transverse section of ditto:—*magnified.*

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TAB. DLXXXII.

PODOCARPUS? NIVALIS. *n. sp.*

Humilis, foliis undique versis oblongis obtuse apiculatis recurvis basi attenuatis supra basi præcipue canaliculatis subtus costa prominente marginibusque incrassatis, amentis masculis pedunculatis ternis basi bracteolatis, antheris cordatis brevi-stipitatis obtusis.

HAB. Mountain of Tongariro, Northern Island of New Zealand, near the limits of perpetual snow. Communicated by *Mr. Colenso,* (*n.* 68.)

Anxious to make known all the different kinds of the, so called "*Pines*" of New Zealand, I here represent a new one, drawn from a very imperfect specimen, it must be allowed, but the only one yet detected, and of which Mr. Colenso has liberally deprived himself for the sake of having it thus made public. I trust Mr. Colenso himself may, ere long, have it in his power to visit the noble mountain, where alone it has been found, and then we shall be certain to possess specimens satisfactory in every particular.

Fig. 1. Upper, and *f.* 2. under side of a leaf. *f.* 3. Masculi amenta. *f.* 4. Single anther:—*magnified.*

TABS. DLXXXIII, DLXXXIV.

Aralia crassifolia. *Sol.*

Arbor, foliis polymorphis coriaceis dentatis obtusis nunc simplicibus cuneato-oblongis nunc lineari-oblongis elongato-attenuatis nunc bi-trifoliatis, floribus racemosis, racemis simplicibus compositisque umbellatis.

Aralia crassifolia. *Sol. in A. Cunn. Bot. of N. Zeal. in Ann. Nat. Hist. v.* 2, *p.* 214.

Aralia heterophylla. *A. Cunn. Mst.*

Hab. New Zealand, Northern Island, *Sir Jos. Banks.* Shaded woods on the shores of the Bay of Islands, Wangaroa, &c. *R.* and *A. Cunningham, Mr. Colenso.* Waihaké, *Dr. Sinclair.* Hokianga, *Edgerley.* Chatham Island, *Dr. Dieffenbach.*

A tree, according to Mr. A. Cunningham, from 20 to 30 feet high, with alternate leaves of a thick firm and coriaceous texture, but extremely variable in form. Our flowering specimens have them 6-8 inches long, oblong-cuneate, obtuse, variously sinuato-dentate, tapering into a short thick footstalk. Other leaves are sent with the specimens, taken probably from another part of the plant (indeed they are all of this kind on our young *living* plants), narrow, and very much elongated, from 10 inches to 2 feet long, brownish purple, blotched with green : other leaves again, which Mr. Cunningham says are from the adult plant, are bi- trifoliolate, with leaflets long and narrow, like the leaves last described. Flowers numerous. Limb of the calyx almost none. Petals ovato-cordate, coriaceous. Stamens 5. Style short. Stigma 5-lobed. Fruit the size of a small pea.

Fig. 1. Flower. *f.* 2. The same fully expanded. *f.* 3. Raceme of fruit, *nat. size. f.* 4. Single fruit. *f.* 5. The same cut through transversely. *f.* 6. Seed :—*all but f.* 3 *magnified.*

TAB. DLXXXV.

Melicope simplex. *A. Cunn.*

Foliis oppositis simplicibus petiolatis rhombeo-obovatis subrotundisve obtusis bicrenatis glabris, racemis simplicibus axillaribus paucifloris petiolum æquantibus. *A. Cunn.*

Melicope simplex. *All. Cunn. Bot. N. Zeal. in Ann. Nat. Hist. v. 3. p. 315.*

Astorganthus Hugelii. "*Endl.*" (*Hugel. in Litt*).

Hab. Northern Island, New Zealand; in forests near the sources of the Hokianga River. *A. Cunningham.* Wairua, about 15 miles from Wangaree Bay. *Mr. Colenso, Dr. Sinclair.*

In the absence of fruit to my specimens, I do not venture to offer an opinion as to whether or not this is really a species of *Melicope*, with leaves reduced to a single leaflet, or the distinct genus, which I am informed, by Baron Hugel, that Endlicher has constituted of it; but where published I have no means of knowing. In my specimens, the ovary is single, which I believe is not the case in *Melicope*: but in our plant, Mr. Cunningham describes 4 carpella as constituting the fruit. In other respects, Mr. Cunningham's description quite accords with the plant here figured. I should have guessed its affinity to be with *Aurantiaceæ.*

Fig. 1. Unexpanded flower. *f.* 2. Expanded flower. *f.* 3. Pistil. *f.* 4. Leaf. *f.* 5. Portion of a leaf, to show the pellucid glands :—*magnified.*

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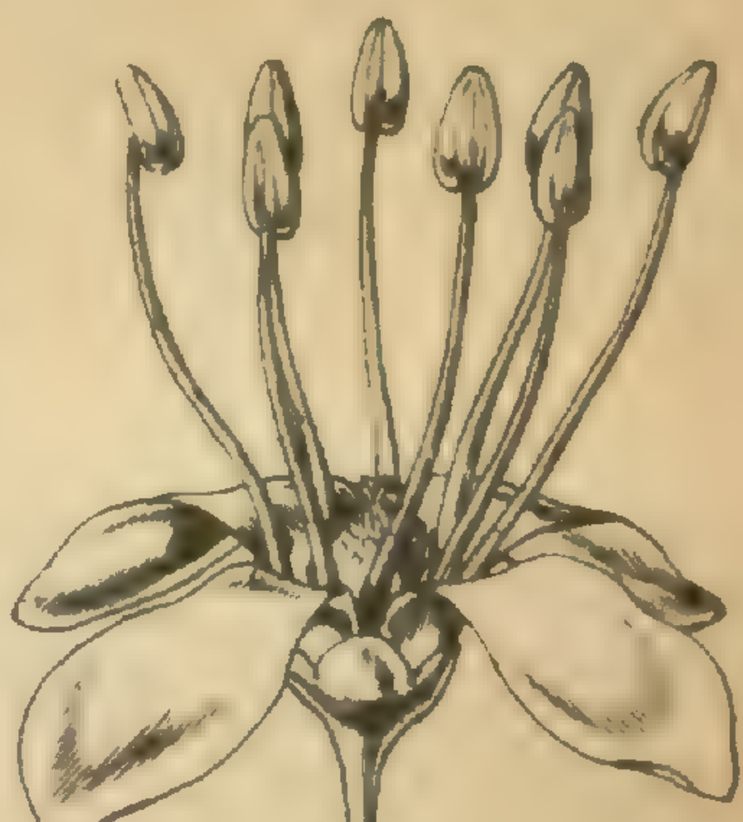

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TAB. DLXXXVI.

Menodora Africana. *n. sp.*

Erecta, foliis bipinnatifidis laciniis linearibus acutis, floribus in ramis ramulisque terminalibus, calycibus multipartitis, capsulæ loculis trispermis.

Hab. Interior of S. Africa. Fat River. Fr. Feb. (n. 1341.) Macalisberg. Fl. Oct. *Burke.*

Radix fusiformis. *Caulis* suffruticosus, e basi ramosus. *Folia* opposita, vix uncialia, bipinnatifida, glabra. *Flores* solitarii, brevi-pedunculati, ex apicibus ramorum ramulorumque. *Pedunculi* scabri. *Calyx* scaber, monophyllus; *tubus* brevis turbinatus; limbus multipartitus, laciniis linearibus simplicibus vel furcatis, corolla brevioribus. *Corolla* subrotata, tubo brevi, limbo 5-lobo, lobis obovatis acutis, æstivatione contortim imbricatis. *Stamina* 2, summo tubi inserta, limbo breviora. *Filamenta* brevia. *Antheræ* ovato-oblongæ. *Ovarium* subrotundum apice bilobum. *Stylus* filiformis, exsertus. *Stigma* obtusum. *Fructus*: *Capsula* magna didyma basi calyce persistente suffulta, lobis carpellisve ovatis demum circumscissis, trispermis. *Semen* ellipticum, trigonum; testa spongiosa. *Embryo* exalbuminosa.

This curious and handsome plant is unquestionably a congener with *Menodora*, H.B.K. (Bolivaria, *Cham. et Schlecht.*), and hitherto supposed to be exclusively an inhabitant of the New World, where it is found, sparingly, from South Brazil to Texas. It is remarkable that a species should now be detected in the interior of S. Africa.

Fig. 1 & 2. Flowers. *f.* 3. Pistil and corolla laid open. *f.* 4 & 5. Didymous capsules. *f.* 6 & 7. Seeds. *f.* 8. Transverse section of ditto:—*magnified.*

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TAB. DLXXXVII.

Semonvillea fenestrata. *Fenzl.*

Glaberrima, ramosa, ramis virgatis in cymas axillares et terminales semel v. pluries iteratas, elongato-racemiformes solutis, foliis linearibus carnosis planis et teretiusculis, floribus ejusdem cymæ apetalis et corollatis, remotis, sepalis mucronulatis, petalis calycem subsuperantibus, carpidiis alatis cum exalatis varie alternantibus, alis orbicularibus basi apiceque retusis pellucidis, nervo rigido viridi peripherico cum aliis e disco concolori, obsoletius recte vel oblique cuspidato, radiatim emanantibus arcuatim anastomosante cinctis, facie symmetrice ideo fenestratis. *Fenzl, in Endl. Nov. Stirp. Dec. V. n.* 48.

Ditroche furcata. *E. Mey. in Drège's S. Afr. Pl.*

Hab. Little Namaqua Land, S. Africa, between the Koussie and Gariep Rivers (S. lat. 28° 30′ and 29° 40′) at an elevation of 1200—2000 feet. Drège, Pl. Cap. n. 3157. (fide Fenzl). Near the Vaal and Caledon Rivers. *Burke.*

The Genus *Semonvillea* was founded by M. Gay on the *S. pterocarpa* of Senegal, and the above character is drawn up by Fenzl in order to distinguish it from that species. In my Herbarium, Drège's specimens of this plant bear no number, but are named "*Ditroche furcata*, E. Mey.", a name which has not, so far as I am aware, yet appeared in print. *Semonvillea* will stand next to *Limeum*, Linn. (*Dicarpæa, Presl*). The fruit is an exceedingly beautiful object, with its broad pellucid band, marked with green radiating lines.

Figs. 1 & 2. Flowers. *f.* 3. Stamen. *f.* 4. Pistil. *f.* 5. Transverse section of the ovary. *f.* 6. Fruit. *f.* 7. Inner face of a carpel. *f.* 8. Transverse section of a carpel. *f.* 9. Vertical section of the cell :—*magnified.*

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TAB. DLXXXVIII.

Ochna (Diporidium) pulchrum. *n. sp.*

Foliis oblongo-subobovatis brevissime petiolatis utrinque acutis minute serratis ciliato-spinulosis, racemis multifloris pendulis, calyce nullo (!), petalis 6, staminibus numerosis, antheris apice biporosis.

Hab. Macalisberg, interior of S. Africa. S. Lat. 25°-26°, *Burke*, (*n.* 191.)

This is one of the many interesting new plants, brought home by Mr. Burke from his long journey into Southern Africa, as stated in the London Journal of Bot. v. 2. p. 163. It is the handsomest of all the genus; and its large flowers in pendent racemes must exhibit a striking appearance on the recent plant. The foliage is copious, and each leaf is edged with a cartilaginous margin, and under a lens are seen to be spinuloso-serrate. There is no calyx (unless the 3 outer petals may be so called), and then the corolla must be considered as reduced to 3 petals. Stamens very numerous. Anthers opening by two pores at the apex, and having a small struma at the base. Gynobase hemispherical, bearing the stamens, and the carpels, about 8, in a circle at the base of the style; each of the latter is one-celled and one-seeded.

Fig. 1. Portion of a leaf. *f.* 2. 3. Flowers. *f.* 4. Stamen. *f.* 5. Pistil and gynobase. *f.* 6. Ovary. *f.* 7. The same laid open:—*magnified.*

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TAB. DLXXXIX.

Clematis Stanleyi. *n. sp.*

Erecta, fruticosa, ubique sericeo-tomentosa, foliis tripinnatisectis laciniis oblongis acutis, panicula terminali foliosa, floribus nutantibus (inter maximos), sepalis obcordato-rotundis utrinque sericeis, staminibus numerosissimis, ovariis sericeis caudibus elongatis sericeo-plumosis.

Hab. Macalisberg, interior of South Africa. *Burke*, (*n.* 157.)

This is, assuredly, the handsomest species of an extensive and handsome genus, and deserves to bear the name of that noble-man, Lord Derby, through whose liberal patronage of natural history, the plant is made known to us. Its discoverer remarks that it forms a shrub, (apparently several feet in height), every where clothed with silky tomentum, so as to have a good deal the appearance of the silky variety of the North American *Anemone patens*. The flowers are as large as those of our Corn-Poppy, and, judging from the dried specimens, purple.

Fig, 1. Pistil:—*magnified.*

TAB. DLC.

Thysantha subulata. *n. sp.*

Glabra, ramis erectis virgatis, foliis oppositis connatis erecto-patentibus subulatis mucronatis canaliculatis, floribus glomeratis axillaribus sessilibus, glomerulis folio duplo brevioribus.

Hab. Caledon River, S. Africa. *Burke.* Fl. Jan.

Radix parva, fusiformis, subfibrosa, annua. Caules erecti, graciles, teretes, spithamæi et ultra, basi præcipue ramosi. Folia opposita, connata, internodiis longiora, erecto-patentia, subulata, canaliculata, mucronata, dorso teretia; superiora florifera. Flores parvi, glomerati, bracteati; glomerulis folio duplo brevioribus. Calyx ad basin 5-partitus, fere 5-sepalus; sepalis lanceolato-subulatis corollam subæquantibus. Corolla campanulata, ultra medium 5-loba, lobis acuminatis, patentibus. Stamina 5, summo tubi inserta, subinclusa. Filamenta brevia: Antheræ subrotundæ. Squamæ hypogynæ nullæ. Ovaria 5, libera, ovata, compressa, stylo recurvo terminata.

This, though an undescribed species, seems quite to accord with the genus *Thysantha* of Ecklon and Meyer.

Fig. 1. Portion of the stem, with leaves and glomerules of flowers. *f.* 2. Single flower. *f.* 3. Corolla laid open. *f.* 4. Ovary :—*maynified.*

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TAB. DXCI.

Chailletia cymosa. *n. sp.*

Foliis oblongis obtusis in petiolum brevissimum attenuatis, ramis pubescentibus inferne nudis floriferis, floribus cymosis, cymis 3-5-floris paniculatis, pedunculis pedicellis calycibusque valde pilosis.

Hab. Aapges River, interior of S. Africa. *Burke.*

Frutex. Caules, ut videtur, perbreves, ramosi. Rami erecti, pubescenti-pilosi, inferne subaphylli, superne foliosi. Folia 3-4 pollicaria, subcoriacea, obtusa, subsessilia, penninervia, venulis anastomosantibus. Stipulæ subulatæ pilosæ. Paniculæ versus basin ramorum bracteatæ, bracteis inferioribus subfoliaceis. Flores cymosi subglomerati. Calyx valde hirsutus fere ad basin 5-6-partitus, tubo perbrevi cum basi ovarii coalito. Petala linearia bifida, glandulis opposita. Stamina petalis alterna paululumque breviora. Antheræ loculi parallelæ, antice dehiscentes. Connectivum subincrassatum. Ovarium imo basi cum calycis tubo adhærens, ovatum, 3-loculare, loculis biovulatis; ovulis pendentibus. Stylus inferne hirsutus, superne trifidus. Stigmata obtusa.

A remarkable looking plant, nearly allied to, if not identical with, De Candolle's genus *Chailletia.*

Fig. 1. Flower. *f.* 2. The same laid open. *f.* 3. Petal, glands, and the bases of two filaments. *f.* 4. 5. Anthers. *f.* 6. Vertical section of the ovary. *f.* 7. Transverse section of ditto:—*magnified.*

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TAB. DXCII.

Combretum salicifolium. *E. Mey.*

Erectum glabrum, foliis oppositis oblongo-lanceolatis integerrimis brevissime petiolatis, floribus pubescentibus capitatis demum spicatis pedunculatis, pedunculo folio breviore axillari, calyce intus villoso, stylo incrassato staminibusque longe exsertis.

Combretum salicifolium. *E. Mey. in Drège, Herb. Afr. Merid.*

Hab. S. Africa. *Drège.* Sunday's River. *Burke.* Fl. Nov.

I have adopted the name attached to this plant in Drège's collections; but I am not aware that any description or character has been given of it.

Fig. 1. Young flower. *f.* 2. Fully expanded flower. *f.* 3. The same, laid open. *f.* 4. Young fruit:—more or less *magnified.*

Allan & Ferguson lith. Glasgow

TABS. DXCIII, DXCIV.

Burkea Africana. *Hook.*

Char. Gen. *Calyx* 5-partitus, lobis æqualibus, æstivatione imbricatis. *Petala* 5, subæqualia, reflexo-patentia, integerrima, æstivatione carinali. *Stamina* 10, corolla breviora. *Filamenta* brevissima, alterna paullo longiora. *Antheræ* oblongæ, æquales, connectivo glandulâ deciduâ apiculato. *Ovarium* subsessile villosum, biovulatum. *Stylus* brevissimus. *Stigma* oblique peltatum concavum margine undulatum. *Legumen* plano-compressum, oblongum, basi angustatum, stipitatum, tenuiter coriaceum, glabrum, indehiscens, medio leviter convexum. *Semina* in medio legumine, 1-2, ovato-orbicularia, compressa, funiculo filiformi margini cavitatis affixa. *Embryo* rectus.—Frutex *v.* arbor 12-15 *pedalis.* Ramuli *crassi, breves, juniores tomento rufo vestiti.* Stipulæ *minutæ.* Folia *abrupte bipinnata,* pinnis *bijugis oppositis,* foliolis *circa* 8 *alternis distantibus petiolulatis oblique ovatis oblongisve obtusis, junioribus utrinque minute argenteo-sericeis, adultis coriaceis, subglabris.* Racemi *axillares, simplices, folio parum breviores.* Flores *parvi sessiles, bracteá minutá suffulti.* Sepala *margine submembranacea breviter ciliata, dorso glabra.* Petala *calyce duplo longiora, oblique ovali-oblonga, obtusa, concava.* Benth.

Burkea Africana. *Hook. Mss.*

Hab. Macalisberg, interior of S. Africa. *Burke.* (n. 274.) *Fl.* Oct.

I am indebted to Mr. Bentham for the character of the present new genus of Leguminosæ, Tribe *Eucæsalpineæ.* I name it in compliment to Mr. Joseph Burke, who accomplished a most extensive journey into the interior of South Africa with the object of collecting plants and animals for the Right Honorable the Earl of Derby, and fulfilled his mission in so satisfactory a manner, that he is now on the point of embarking on a similar errand for Lord Derby and the Royal Botanic Gardens of Kew conjointly, to visit Hudson's Bay, and then proceed westward across the Rocky Mountains to N.W. America and California, where we trust he will be equally successful as in Africa.

I regret not to be able to figure the fruit. It was detected in another part of the Herbarium after the plate was printed. Living plants are in Lord Derby's Collection and in that of Kew.

Fig. 1. 2. Flowers. *f.* 3. Pistil. *f.* 4. Young fruits. *f.* 5. One of the same. *f.* 6. Ditto laid open :—all more or less *magnified.*

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TAB. DXCV.

Rhus Thunbergii. *Hook.*

Polygama, foliis simplicibus obovato-ellipticis retusis coriaceis parallelim venosis utrinque subtus præcipue pulverulenti-glaucis, paniculis terminalibus, pedicellis sepalis petalisque 5-6 extus pubescenti-pilosis, staminibus 5-10, fructu oblique globoso.

Roemeria argentea. *Thunb. Fl. Cap. p.* 194. (*excl. syn. Burm. Decad. Pl. Afr. t.* 92. *f.* 1. *Ecklon et Mey. Enum. Pl. Afr. Austr. p.* 142. Heeria. *Meisn. Gen.*—*Endl. Gen.*—Sideroxylon argenteum. *Thunb. Prodr. p.* 36. *Willd. Sp. Pl. p.* 1090. *Spreng. Syst. Veget.* 1. *p.* 666. (*excl. syn.* Sersalsia obovata. *Br. N. Holl.*) *Harvey, Gen. South Afr. Pl. p.* 142.—Bumelia? argentea. *Rœm. et Sch. Syst. Veget.* 4. *p.* 499. (*excl. syn. Burm.*) *Don, Dict. of Gard. & Bot. v.* 4. *p.* 31. (*excl. syn. Burm.*) —Cestrum venenatum, *ms. in Kew Gardens* (*specimen without flower*),-*Hortus Kewensis?* 2. *p.* 2. (*non Willd.*)

Hab. South Africa, Montes Paarl in Langekloof, near Cape Town, and elsewhere. *Thunberg. Masson. Dr. Thom.* Zeekoe-valley, Clanwilliam, and in the valley of Tulbagh. *Ecklon* and *Zeyher.* Hex River. *Mr. Burke.* "*Kliphout*" of the colonists.

It has been the fate of this plant, which appears by no means uncommon even immediately about the Cape, to be singularly misrepresented. It has probably been seen by few of the *authors* above mentioned, and examined by none, save Ecklon and Meyer, who have rightly referred it to *Terebinthaceæ*, retaining *Roemeria* as a distinct genus of that family. An accurate examination however of the flowers and fruit (though the latter is immature) has satisfied me that it does not really differ from *Rhus*; or if *Mauria* of Humboldt can any way be separated, it might be placed there, for it bears a close affinity to *Mauria simplicifolia*, H. B. K., and scarcely less to *Rhus caustica*, Hook. et Arn. Bot. of Beechey's Voy. t. 7.

Fig. 1. 2. Flowers varying in the number of the parts. *f.* 3. Petal. *f.* 4. Stamens and pistil, and annular disk. *f.* 5. Immature fruits *(nat. size)*. *f.* 6. One of the same. *f.* 7. The same laid open:—all but *f.* 5. more or less *magnified.*

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TAB. DXCVI.

Trichinium remotiflorum. *Hook.*

Glabrum, caule elato erecto herbaceo superne paniculato angulato-striato, foliis fasciculatis lineari-subulatis mucronato-acutis, spicis elongatis, floribus solitariis remotis 3-bracteatis, bracteis lateralibus intus pilorum fasciculo demum longissimo, sepalis lanceolatis apice mucronato-spinosis margine membranaceis dorso hirsutis, antheris linearibus.

Hab. Vaal River, South Africa. *Mr. Burke*, (*n.* 105).

Ernest Meyer has a *Trichinium latifolium*, discovered by Drège in South Africa; but that is a very different plant from the present, which seems quite to agree with the character of Mr. Brown's *Trichinium*, except that I do not find the tufts of silky hairs of the perianth becoming more patent in age, and they seem to have a different origin. At the inner base of each of the side bracteas, while the flower is young, is a small tuft of hairs, much smaller than the bracteas: but as the flowers advance, these tufts increase remarkably in size, so as to attain to 4 times the length of the bracteas and almost wholly to conceal the flower, as shown at *f.* 3. It appears to me that *Eurotia Capensis* and *E. glabra* of E. Mey. n. 2914, both of Drège's Cape Plants, are allied to, if not identical with, this genus.

Fig. 1. Young flower with its bracteas. *f.* 2. Flower removed from the bracteas and laid open to show the stamens and small woolly pistil. *f.* 3. Mature flower, with the 2 tufts of hairs fully developed:—*magnified.*

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TAB. DXCVII.

Hermannia boraginiflora. *Hook.*

Suffruticosa, erecta, pubescenti-stellata, subviscosa, foliis breviter petiolatis planis (non plicatis) obovato-cuneatis serrato-dentatis, floribus 3-4 ex axillis foliorum supremorum, pedicellis unifloris supra medium minute bibracteatis, calycibus campanulatis profunde 5-fidis post anthesin vix inflatis, laciniis lanceolato-subulatis tubo duplo longioribus, petalis cuneato-spatulatis unguibus ciliatis calyce brevioribus, staminibus longe exsertis, filamentis superne dilatatis antherisque apice bifidis ciliatis, ovario clavato piloso.

Hab. Macalisberg, S. Africa. *Mr. Burke.*

Macalisberg is a very remote country of Southern Africa, which has lately been visited by Mr. Burke (as mentioned at p. 163 of the London Journal of Botany, v. 2.), situated, according to this traveller's observations, between 25° and 26° of S. lat. and 27° and 28° of E. longitude. It is a very elevated and mountainous district, giving rise to several rivers, which empty themselves on the one hand into the Indian Ocean at Delagoa Bay, and on the other, by their confluence with the Gariep, or Orange River, into the Atlantic Ocean. It was here that Mr. Burke found, as might be expected, his most interesting plants, several of which are already prepared for publication in this work. The present species of *Hermannia* is remarkable for its very protruded stamens, which connive into a cone-like form, and thus give the appearance of a *Borago* or *Trichodesma*.

Fig. 1. Flower. *f.* 2. The same, a portion of the calyx laid open. *f.* 3. Petal. *f.* 4. Stamen :—*magnified.*

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TAB. DXCVIII.

Haloragis cordigera. *Hugel.*

Sparse deciduo-pilosa, caule basi suffruticosa, ramis erectis virgatis, foliis lineari-angustis subteretibus, floribus racemosis nutantibus, calycis turbinato 8-angulato hispido laciniis profunde cordatis marginibus lobisque præcipue reflexis, petalis unguiculatis cymbiformibus carina hispidis calyce duplo longioribus.

Haloragis cordigera. *Hugel Enum. Pl. Nov. Holl. Austr. Occ. p.* 45.

Hab. Swan River, Australia. *Baron Hugel, Jas. Drummond.*

This plant has been accurately described by Baron Hugel, who considers it as dicœcious; but the flowers of our specimens afford both stamens and pistils, apparently perfect. The anthers are very large, and each petal is so shaped and so placed as to be completely filled by the anthers before they expand; they then fall down pendent, suspended, for a time at least, by the short unguis, while the stamens continue, for a while, erect. I find four styles to the pistil, each terminated by a capitate downy stigma. Cells of the ovary 2, each having 2 suspended ovules.

Fig. 1. Flower-buds. *f.* 2. Expanded flower. *f.* 3. Flower, from which the stamens and petals are removed. *f.* 4. The same laid open:—*magnified.*

TAB. DXCIX.

Nissolia fruticosa. *Jacq.*

Nissolia fruticosa. *Jacq. Am. p.* 198. *t.* 145. *f.* 44. *Hort. Vind. t.* 167. *De Cand. Prodr.* 2. *p.* 257. N. racemosa. *De Cand. Prodr. l. c. De Less. Ic. v.* 3. *t.* 68. N. hirsuta. *De Cand. Prodr. l. c.*

Hab. Carthagena, Mexico, Santa Martha. *Jacquin, Née, Bertero, Galeotti.* Tucuman, *Tweedie.*

Caulis fruticosus, volubilis, pubescens ut magis minusve fere tota planta. *Folia* sublonge petiolata pinnata, foliolis 5 (4 cum impari), brevi-petiolulatis ovatis acutis mucronatis. *Stipulæ* cito deciduæ; pedicellis nunc axillaribus aggregatis unifloris, 3-30 verticillatis, gracilibus; nunc in racemos magis minusve elongatos dispositis (et tunc *N. racemosa*). *Calyx* brevis, subhemisphæricus, ore truncato 5-dentato, parum obliquo, dentibus minutis, inferiore paululum longiore recurvo. *Cor.* papilionacea flava. *Vexillum* ovato-oblongum obtusum, dorso pubescens. *Alæ* carinaque oblongo-falcatæ, unguiculatæ. *Stamina* decem, in tubum monadelphum, superne fissum, unita. *Antheræ* rotundatæ. *Ovarium* brevistipitatum, lineari-falcatum, stylo subulato terminatum. *Fructus: Legumen* stipitatum, 1-4-spermum, 1- aut transversim pauciloculare, desinens in alam membranaceo-foliaceam, falcatam, legumine duplo latius.

Botanists seem now to be agreed that the genus *Nissolia* should be confined to the first section of De Candolle, "*Nissoliaria*;" the other species being referred to *Machærium.* Of the three species in that section, Mr. Bentham has, in my Herbarium, if not elsewhere, recorded his opinion that two out of the three constitute but one species; or, in other words, that *N. racemosa* is only a variety of the original *N. fruticosa.* Indeed I possess the two forms on a single specimen. The remaining one, *N. hirsuta,* I have myself ventured to unite with it, differing, as it does, only in a little more hairiness.

Fig. 1. Flower. *f.* 2. The same, the corolla being removed. *f.* 3. The vexillum. *f.* 4. The alæ. *f.* 5. The carina. *f.* 6. The pistil:—*magnified.* *f.* 7. Fruit:—*nat. size.*

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TAB. DC.

Ranunculus pilulifer. *n. sp.*

Humilis, annus, pilosus, caulibus filiformibus basi præcipue ramosis, foliis remotis longe petiolatis basi vaginantibus subtriternatim sectis, laciniis oblongo-ovatis acutis sæpe bifidis, floribus minutis axillaribus solitariis sessilibus, capitulis globosis, carpellis oblique ovatis compresso-carinatis rugosis stylo brevi uncinato terminatis.

Hab. Swan River settlement. *Jas. Drummond.* (*n.* 9.)

A small, but very distinct and well marked species of Crowfoot. The flowers are so minute that the real structure of the sepals and petals cannot, in the dried state, be correctly described; but they are succeeded by globose heads of carpels, which are very conspicuous upon the slender stems. Each carpel is wrinkled, scarcely tuberculate, laterally compressed, the back, or keel, forming a thickened edge.

Fig. 1. Flower. *f.* 2. Head of carpels. *f.* 3. Single carpel: —more or less *magnified.*

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